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ABSTRACT

A study examined local work-related education and training institutions from a system perspective. Information was obtained through field interviews of staff and administrators in secondary education, community colleges and technical facilities, and Job Training Partnership Act (JTPA) and similar programs, as well as record data from eight communities in four states: Fresno and San Jose, California; Jacksonville and Miami, Florida; Des Moines and Sioux City, Iowa; and Philadelphia and Scranton, Pennsylvania. The study found that many of the same types of programs, with similar purposes and strategies, exist in all the communities studied. However, some newer programs, such as work-for-welfare programs, vary considerably from place to place. The relationships among different education and training institutions, rather than their individual identities, create local systems of work-related education and training. Surprisingly little duplication and competition were found. The study derived a standard model and three variants in the divisions of programs in the communities. In the standard model, a dense network of relationships is established among education and training institutions. In the variations: (1) educational institutions are closely coordinated but lack contact with JTPA programs; (2) community colleges dominate; and (3) institutions are autonomous, with little coordination. Eight factors were cited for the varying types of relationships. Recommendations were made to design measures of effectiveness for the various types of local educational systems. (An appendix gives an overview of providers in the eight communities. There are 55 references.) (KC)

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**LOCAL SYSTEMS OF
VOCATIONAL EDUCATION
AND JOB TRAINING:
DIVERSITY, INTERDEPENDENCE,
AND EFFECTIVENESS**

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PREFACE

This report is part of a continuing effort by the National Center for Research in Vocational Education (NCRVE) to understand the larger institutional and policy context in which vocational education operates. It examines the strategies that education and training institutions in eight local communities use to prepare individuals for employment and the ways in which those institutions respond to the federal and state policies they must implement. The report argues that the effectiveness of individual institutions and programs cannot be assessed without taking into account the entire education and training system operating in the community. This analysis is intended for individuals and groups in the federal, state, and local policy communities who are concerned about institutional coordination in work-related education, and for those who manage the increasingly complex array of programs implemented by local institutions.

SUMMARY

The most notable characteristic of institutions that educate and train for employment is their growth over the past three decades. High schools, the traditional locus of public sector vocational education, have been joined by area vocational schools, community colleges, and post-secondary technical institutions. Federal funding sources, most recently the Job Training Partnership Act (JTPA) and the JOBS (Job Opportunities and Basic Skills) program of the Family Support Act of 1988, have added private sector organizations such as community-based organizations (CBOs), unions, proprietary vocational schools, and firms to the ranks of institutions providing publicly subsidized job training. In addition, many states have initiated their own economic development programs, providing yet other training resources. Thus the system of education and training institutions that has emerged in response to government funding has become increasingly complex and variegated.

Yet because this system has been unplanned and largely uncoordinated, developing incrementally in response to constituent pressures and the inadequacies of past policies, it is in fact a collection of separate institutions, with varied motives and funding incentives and without the integration that the term "system" implies. Perhaps for this reason, vocational education and job training is not commonly thought of as a system; rather, policymakers, practitioners, and analysts have tended to concentrate on one institution or program at a time, with those studying vocational education, for example, isolated from those concerned with JTPA or welfare programs.

This report examines local work-related education and training institutions from a system perspective. It finds that not only do these institutions show substantial regularities in their interactions, in some communities at least, they are quite interdependent, with a clear division of labor. Given this situation, it is difficult to understand how a particular community college, welfare-to-work program, or state economic development initiative operates unless one understands the entire array of institutions providing work-related education and training in a given community.

Our findings are based on field interview and record data collected on eight communities in four states: Fresno and San Jose, California; Jacksonville and Miami, Florida; Des Moines and Sioux City, Iowa; and Philadelphia and Scranton, Pennsylvania. We interviewed principals, counselors, and teachers involved in secondary vocational education; administrators and instructors at community colleges and regional vocational-technical facilities; JTPA administrators and providers; welfare administrators; and a small sample of employers who either have received publicly funded job training services or are major employers of persons trained in local institutions. Our purpose was to examine how different types of local communities and labor markets organize education and training services and how they respond to federal and state policies.

LOCAL SYSTEMS OF EDUCATION AND TRAINING: PATTERNS AND VARIATIONS

The eight communities we investigated have important similarities: There is remarkable uniformity in the kinds of institutions they contain and in the basic functions of those institutions. In some cases, federal legislation such as the JTPA program has created a funding mechanism and regulations that encourage relatively standard practices, even though considerable variation

is possible (if often unexercised) at both the state and local level. In others, such as the secondary schools and community colleges that have emerged from a history of local control, one might expect to see radically different kinds of institutions. But even in those communities, national movements, state policies, and emulation have led to schools and colleges with similar purposes and strategies. Most of the programs we examined have become well-established, with highly regularized practices, clear similarities from place to place, and well-established identities within the community. However, this has not happened in some programs that are still developing, such as welfare-to-work and adult schools, and these vary substantially from place to place.

The relationships among different education and training institutions, rather than their individual identities, create local systems of work-related education and training. There is potentially a great deal of overlap among programs. Many offer relatively short nondegree vocational skills courses, for example, and a few occupational areas (e.g., secretarial and clerical, health, the trades, computers and electronics) are common in all vocational education and job training programs. Therefore, there is always the possibility of duplication—the fear uppermost in the collective mind of Congress when it requires coordination of federal programs—or of competition.

Although we found both duplication and competition in local education and training programs, there is surprisingly little of either. We generally found a rough stratification of programs providing work-related education and training, with divisions among institutions based primarily on types of programs and secondarily on types of clients. Community colleges provide the most sophisticated vocational programs, including two-year Associate degree programs and certificate programs that may last up to two semesters. Adult schools and area vocational schools provide shorter, more intensive, entry-level skill training, open to all students, including JTPA and welfare clients. Community-based organizations provide similar vocational programs, but usually for specific groups of JTPA clients rather than the public at large. Many firms provide short-term on-the-job training in skills specific to their own needs, using methods quite different from those used in classroom vocational training. Community colleges provide some customized training for firms and other employers, but this too is quite different in purpose from other kinds of training.

In seeking to minimize competition and establish either formal or informal divisions of labor, local education and training institutions adhere to patterns that might loosely be called models. We identified one standard model and three variants in the eight communities we studied. In the standard model, a dense network of relationships is established among education and training institutions. For example, high schools and community colleges provide vocational courses at different levels of sophistication, and articulation agreements between them specify logical sequences of programs. Similarly, JTPA programs work with local education and training institutions through a variety of subcontracting arrangements. Welfare-to-work programs in this common approach have begun to offer vocational training by subcontracting with local JTPA programs to provide some or all of their services.

The standard model defines the basic network of relationships among education and training institutions. In the first of three variations on this pattern, educational institutions are closely coordinated but have limited interaction with JTPA and welfare-to-work programs. In the second, community colleges dominate all other institutions and provide almost every form of job-related training. In the third, the institutions that constitute the education and training system are essentially autonomous, and there is little interaction among them.

Other configurations of work-related education and training almost certainly exist, but our eight-community analysis suggests several conclusions that we believe are generalizable across the country. First, individual education and training institutions are roughly similar across communities in the types of training they provide and in the clients they serve. Major variations within each institutional category stem from the way in which a particular institution defines its mission and from the functions it chooses to assume in addition to its traditional, core mission (e.g., a community college may decide to add short-term, entry-level job training to its traditional program of longer-term, more advanced vocational education). Second, local systems are creations of the interaction among institutions and programs, and those relationships can vary significantly from community to community. Even with this variation, however, commonalities are evident. The most important is that, contrary to common belief, there is little duplication or competition among institutions. Probably because of either the cost or the uncertainty inherent in competition, even the most entrepreneurial institutions are careful not to intrude too far into the territory claimed by others.

THE ROOTS OF INTERDEPENDENCE

The relationships that local institutions establish with each other and the ways in which they either link their activities or fail to do so create patterns of system interdependence. We found eight factors that are particularly important in explaining why education and training institutions vary in their interactions. First, fiscal inducements and funding mechanisms provide—usually inadvertently—incentives and disincentives to collaborate. The nature of funding arrangements is particularly significant in structuring local systems because nearly all education and training programs try to shift costs to others as a way of expanding the services they can provide. Shifting costs to other institutions—e.g., sending welfare clients to adult schools for remediation and to area vocational schools and community colleges for skills training—is often the only possible way to provide meaningful services to reasonable numbers of clients.

A second factor is interdependence resulting from policy directives. Some are quite powerful—for example, state policies requiring a clear division of labor among institutions or specifying which institutions may receive state funds. Others, such as federal and state policies that require collaborative planning but not collaborative service delivery, produce largely symbolic or procedural changes.

Third, collaboration is encouraged by local initiatives, such as articulation agreements worked out among local institutions in the belief that all institutions and their clients are better served if clear pathways among programs are established.

Local brokers represent a fourth source of coordination. These include the subcontracting role of JTPA and welfare-to-work programs that tend to bring together many local education and training institutions through their planning processes. Private and public groups outside the education and training system, including chambers of commerce, business promotion groups, and city offices of economic development, may also act as third-party brokers.

A fifth factor that affects how local systems operate is, not surprisingly, their scale. In relatively small communities, communication among education and training programs is much simpler, because fewer institutions are involved.

A sixth element determining the variation among local systems is the history and culture of individual institutions, particularly their decisions about goals and emphases (e.g., whether a

community college stresses transfer-oriented programs vs. substantial economic development activities), which influence how they relate to other institutions in the community.

Seventh, the desire to avoid competition leads many programs to try to find particular labor market niches that allow them to operate without treading on the turf of other programs. A niche may be defined by levels in the labor market or in terms of target populations.

The eighth influence on systems of work-related education and training is the nature of local politics. However, with a few notable exceptions, we found little evidence of local political alliances influencing education and training relationships (e.g., which types of institutions were awarded JTPA contracts).

Given the multiplicity and the complexity of the institutions providing education and training, it is not surprising that many factors influence local configurations. The problem is that these factors can interact in many different ways, so their influences are rarely simple or direct. For example, even institutions with divergent missions may work together when there are fiscal incentives to do so, and good personal relationships may avail nothing in the absence of institutional support. With a larger sample of communities and additional study, it might be possible to determine which factors are the most important, which are likely to operate in tandem with others, and which can most easily be rendered less significant. But for the moment, our principal conclusion is that the complexity of and variation among local education and training systems stem not primarily from the absolute numbers of different institutions in a given community, or from differences in their individual missions, but from the multiplicity of factors that influence how these institutions interact with one another.

THE CONSEQUENCES OF VARIATION IN LOCAL SYSTEMS: DILEMMAS OF EFFECTIVENESS

One of our major reasons for describing local education and training systems in these eight communities and analyzing the variation among them was to identify a range of models that other local communities might consider in modifying their own systems. Understanding the key similarities and differences among systems and the most influential factors in shaping them is a first step beyond the current program- or institution-specific view of education and training. But such information is of limited use if it cannot provide answers to the proverbial question, What does it matter? We must be able to identify the types of local systems that are most effective in providing work-related education and training and in preparing individuals for productive employment. For example, are education and training more effective in communities that follow the standard model of institutional interrelationships or where active community colleges dominate the local system than in communities in which autonomous institutions have few connections with one another or where educational institutions and job training programs operate independently of one another?

We cannot answer such questions at this point. Ours was an exploratory study designed to map the major dimensions along which a limited number of local systems vary. However, even if we had devoted considerably more resources to this endeavor, we could not have answered the effectiveness question at the level of entire local systems. Most policymakers and researchers consider performance in education and job training on a program-by-program and institution-by-institution basis. Consequently, indicator data that are comparable across institu-

tions and programs and analytic techniques that generate valid measures of systemwide performance are lacking.

We recommend that efforts be undertaken to design a set of indicators that can measure the effectiveness of entire local education and training systems. Six categories of indicators are particularly important: those that measure the education and training system's accessibility to individuals, accessibility to employers, adaptability to labor market changes, employment effects, program quality, and cost.

A growing paradox in work-related education and training makes it imperative that local institutions be examined from a system perspective. On the one hand, the proliferation of federal programs shows no evidence of stopping. At the same time, the numbers and types of local institutions remain relatively stable. This continuing tension between the relative stability of local institutions and the proliferation and growing complexity of policy initiatives makes a systemwide perspective on work-related education and training critical. Neither policymakers nor analysts can persist in considering individual institutions independent of the larger political and organizational context in which they operate. Although most policy will continue to be made on a program-by-program basis and local institutions will continue to be distinguished by the different services they provide to different clients, the relationships among them will be an equally important determinant of how effectively the education and training needs of local communities are met. For this reason, we urge that future research on work-related education and training take a system perspective and that efforts to assess effectiveness use indicators that focus on the entire system as well as its individual components.

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Reviews by Thomas Bailey of Columbia University and David Stern of UC Berkeley encouraged us to make our analysis more systematic and to clarify some of our major findings. We appreciate their efforts to help make this a stronger and more useful document. We are also grateful to Janet DeLand for sharpening our prose and to Marilyn Gerbi for preparing the manuscript.

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GLOSSARY

ABE	Adult Basic Education
ADA	Average daily attendance
AFDC	Aid to Families with Dependent Children
AVTS	Area vocational/technical school
CBO	Community-based organization
CCP	Community College of Philadelphia
CETA	Comprehensive Employment and Training Act
CJT	Customized Job Training (Pennsylvania)
ESL	English as a Second Language
ETP	Employment Training Panel (California)
FTE	Full-time equivalent
GAIN	Greater Avenues for Independence (California)
GED	General Equivalency Diploma
JOBS	Job Opportunities and Basic Skills
JTPA	Job Training Partnership Act
MDTA	Manpower Development Training Act of 1962
NAVE	National Assessment of Vocational Education
NCRVE	National Center for Research in Vocational Education
OIC	Opportunities Industrialization Center (Philadelphia)
OJT	On-the-job training
PIC	Private Industry Council
RAVAC	Regional Adult Vocational Advisory Council
RFP	Request for proposal
ROC/P	Regional Occupational Centers and Programs (California)
SDA	Service delivery area
VTC	Vocational Training Center (Fresno)
WEPIC	West Philadelphia Improvement Corporation
WITCC	Western Iowa Technical Community College

1. INTRODUCTION

Over the past thirty years, the institutions that educate and train people for employment have grown in number and complexity. High schools, the traditional locus of vocational education, still provide some job-specific education, but in many areas, enrollments have fallen and the purpose of vocational programs has changed. Increasingly, vocational education takes place in area vocational schools, community colleges, and postsecondary technical institutes. The development of job training through the Job Training Partnership Act (JTPA) and through the welfare system, especially the Job Opportunities and Basic Skills (JOBS) program of the Family Support Act of 1988, has generated new federal and state funding for specific groups of individuals. At the same time, the range of institutions that provide publicly subsidized job training has expanded to include community-based organizations (CBOs), unions, proprietary vocational schools, and private firms. Many states have initiated their own economic development programs, providing yet other training resources intended to lure employment from other areas, facilitate local expansion, or forestall employers from leaving the area. Tax policy, especially the Targeted Jobs Tax Credit, has provided incentives for firms to provide training, and by all accounts, firm-based training has expanded enormously. Proprietary schools have also increased their enrollments, partly in response to increased student aid during the 1970s. Thus the "system" of work-related education and training institutions—those that consciously prepare individuals for relatively specific occupations that do not require a Bachelor's degree—has become increasingly complex and variegated.

Yet this system has been unplanned and largely uncoordinated, developing incrementally in response to constituent pressures and the inadequacies of past policies. It is in fact a nonsystem of separate institutions, with varied motives and funding incentives and without the integration that the term "system" implies. Perhaps for this reason, vocational education and job training are not generally perceived as a system. Rather, policymakers, practitioners, and analysts tend to concentrate on one institution or program at a time, with those studying vocational education usually quite isolated from those examining JTPA or welfare programs.

Although the existing "system" may sometimes appear confusing and chaotic, the institutions it comprises show substantial regularities in their interactions. Furthermore, these institutions are often quite interdependent, having created a division of labor among themselves. As a result, it is difficult to understand how a particular community college, welfare-to-work program, or state economic development initiative operates unless one understands the entire array of institutions providing work-related education and training in the community.

It is also important to examine systems of institutions, rather than separate programs, because many individuals searching for training and employers recruiting trained workers can choose from a variety of roughly equivalent programs. Almost every job training program offers some

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courses in clerical skills; electronics, computer programming, and automotive programs are common; and a variety of programs in health occupations are available in every community. To understand what training is available to whom, one must know which institutions provide different types of training, and where institutions have deferred to others in program offerings.

STUDY PURPOSE

The education and training system in the United States is a creature of the federal and state policies that fund and regulate it. Yet the institutional makeup of this system varies considerably across local communities, depending on the nature of the labor market, population demographics, and patterns of political support. Thus to understand this system, we must have information about the state and federal policies that drive it, the nature of local educational institutions, and the ways those institutions translate policy directives into operating programs.

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The larger research project of which this report is a part addresses four basic questions:

- What is the range of policy strategies that the federal government and states currently use to provide work-related education and training, and how do these strategies differ across states and target populations?
- What are the major features of each of these strategies—who are the primary recipients, how much do the programs cost, and how are the services delivered?
- Which institutions provide publicly funded education and training in different types of local communities, and to what extent do these institutions coordinate their activities or establish a division of labor?
- How consistent is local institutions' implementation of federal and state policies with policymakers' initial expectations?

Two other reports (McDonnell and Grubb, 1991; McDonnell and Zellman, forthcoming) address the first two questions by analyzing the policy instruments the federal government and states use in promoting their education and training objectives, and by providing an overview of the education and training policies of the fifty states. The present report addresses the latter two questions by examining several *local* communities and the education and training institutions that operate in each.

There are several reasons for this shift from the state and federal level to the local level. First, individuals searching for training and firms searching for well-prepared employees experience the education and training system at the local level. For the labor market we are examining—jobs that typically require less than a Bachelor's degree—relatively little effort is made by either firms or individuals to search outside a local area. With only a few exceptions, labor markets and related training programs are local rather than regional or national in scope.

Second, the interdependencies among institutions and programs that create local systems have been shaped more by local factors than by either federal or state policy. Clearly, systems of education and training institutions have been stimulated by federal and state legislation that established new institutions and new funding streams. In addition, interdependencies among institutions have been shaped in part by federal and state policies, including federal coordination requirements, state-level policies to knit different institutions together, and state funding mechanisms.¹ Nevertheless, federal and state efforts consciously related to coordination are only a few of the policies that influence vocational education and job training, and in most cases the extent of coordination reflects local practices and initiatives that have little to do with federal or state requirements (Grubb, Brown, Kaufman, and Lederer, 1989, 1990). As a result, the system of work-related education and job training can be understood only at the local level, and efforts to describe it in terms of federal legislation and state policies may be quite misleading.

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A third reason for focusing on the local level is the considerable variation from place to place in the nature of education and training systems. A particular type of training program—for example, short-term, intensive, entry-level training—may be provided by a community college in one community, by an adult school in another community, by an area vocational school or a technical institute in another, and by CBOs funded by JTPA in another. Similarly, particular kinds of individuals—for example, the long-term unemployed supported by JTPA, welfare recipients, or displaced workers—may find themselves in community colleges in one community, in adult schools in another, in short-term on-the-job training (OJT) in another, and with little access to training in another.

Nevertheless, we found relatively little variation among localities in the basic activities undertaken by specific types of institutions. Community colleges perform relatively similar functions everywhere (despite being decidedly local institutions), and variations in other education and

¹On the coordination among vocational education, JTPA programs, and welfare-to-work programs, see Grubb, Brown, Kaufman, and Lederer (1989, 1990), annual reports of the National Center for Research in Vocational Education (NCRVE). On the coordination of JTPA more generally, see Trutko, Bailis, and Barnow (1989).

training institutions are similarly minor. What *does* vary, however, is the interaction among institutions and the division of labor among them. In the eight communities we studied, we identified four distinct patterns:

- A "standard model," in which linkages among educational institutions are relatively well-articulated; JTPA has substantial contracts with educational institutions as well as CBOs; and welfare-to-work programs use existing institutions (especially JTPA) to provide training and remediation.
- A model of parallel systems, where educational institutions are well-articulated but relatively independent of JTPA and welfare-to-work programs.
- Systems in which community colleges are dominant, providing nearly every form of education and training, including noncredit adult education, short-term job training for JTPA and welfare clients, and customized training for economic development initiatives.
- A community of autonomous institutions, in which the components of the education and training system are independent of, and relatively indifferent to, those of other institutions.

These twin themes—interdependence among the institutions that create local systems of vocational education and job training, and diversity in the nature of these systems among communities—dominate our findings.

There are undoubtedly other models in other communities, but the essential point is that communities do differ in the interactions among their education and training institutions.

These twin themes—interdependence among the institutions that create local systems of vocational education and job training, and diversity in the nature of these systems among communities—dominate our findings.

Much of the historical concern with interdependence of educational institutions has focused on the importance of coordination, especially to eliminate duplication and overlap in the interest of efficiency. However, contrary to the conventional perception, we found relatively little duplication. Locally, education and training institutions face substantial incentives to avoid duplication; and since demand for training exceeds available resources for many groups, there is little danger of it.

The more important question is whether cooperation can enhance the effectiveness of education and training. Therefore, the primary goal should be to assess the effectiveness of existing systems and to judge whether certain configurations might be better than others. The question of effectiveness, however, proves to be nearly intractable, given how little we know about the outcomes of individual education and training

programs and particularly about the performance of entire local systems. Yet this dilemma is itself important because several current developments—especially the movement to establish program performance measures and accountability systems—make questions of effectiveness increasingly critical. The entire configuration of education and training programs must be understood, since the performance of any one program may depend on its interaction with other programs and on the performance of those other programs and the institutions that implement them. The consequences, intended and otherwise, of applying different performance standards and effectiveness criteria can be understood only within the operational context of entire local systems of work-related education and training.

We selected eight local communities in four states for intensive case studies: Fresno and San Jose, California; Sioux City and Des Moines, Iowa; Philadelphia and Scranton, Pennsylvania; and Miami and Jacksonville, Florida. We selected these four states because of their geographic dispersion and because they vary both in the extent of state control over local institutions—a potentially crucial influence on local systems—and in the programs each has enacted. Florida has been particularly active in shaping secondary vocational education, regulating adult schools and community colleges, and establishing state policies on the division of labor among institutions. Iowa has also recently enacted legislation establishing fifteen regional planning boards to coordinate the sequence of vocational courses across the secondary and postsecondary levels. In California and Pennsylvania, on the other hand, state government exerts considerably less influence over education and training. Although California has enacted comprehensive reforms of its elementary and secondary school system, state-level influence over community colleges and JTPA programs has been relatively weak, and California's welfare-to-work programs vary substantially among counties. Pennsylvania has a strong tradition of local control, particularly with regard to its community colleges.²

Despite variation in levels of policy activism, these four states have all recently enacted several education and training programs that have contributed to the complexity and visibility of local education and training systems. California's Greater Avenues for Independence (GAIN), enacted in 1985, was among the first comprehensive welfare-to-work pro-

STUDY METHODS

Site Selection

²The selection of these four states was based on preliminary results from a telephone survey of fifteen to twenty program administrators and legislative and gubernatorial staff in each of the fifty states. The interviews focused on five areas: secondary vocational education, postsecondary vocational education, JTPA programs, state-funded job training programs linked to economic development strategies, and welfare-to-work programs. The results of this survey are reported in McDonnell and Grubb (1991) and McDonnell and Zellman (forthcoming).

grams. This program was implemented well before the federal JOBS program, which states were required to have operating by October 1990, so the inclusion of California allowed us to examine how welfare-to-work programs might be integrated into local systems. In contrast, the welfare-to-work programs in other states—Project Independence in Florida, Joint Jobs in Pennsylvania, and Promise/JOBS in Iowa—were established more recently, making it difficult to assess how they will fit into the existing system of local institutions.

The question of effectiveness proves to be nearly intractable, given how little we know about the outcomes of individual education and training programs and particularly about the performance of entire local systems.

In addition, all four states have enacted economic development programs that include support for training that is customized for specific employers. California's Employment and Training Panel (ETP) provides funds from the unemployment insurance system for firm-specific training; it is unique among state job training programs in that it includes strict accountability standards—training costs are not reimbursed until a trainee has been employed for at least 90 days in a job utilizing the skills learned. In contrast, Iowa's Industrial New Jobs Training Program operates through community colleges, allowing them to use funds from bond sales to support customized training; the bonds are then repaid from the corporate taxes of the firms that have benefited. Florida's Sunshine State Skills Corporation provides grants to various providers, including community colleges and adult schools, for firm-specific training intended to lure employers to Florida. In contrast to California's ETP, which is run by a quasi-independent board, Pennsylvania's Customized Job Training (CJT) program is administered by the state department of education, and firms applying for training support must submit their applications through a local education agency (school district, area vocational/technical school (AVTS), community college, state college, or university). Although these state economic development efforts are in several cases relatively unimportant to local systems, their enactment is testimony to a new activism in states—yet another complexity in the education and training system.

In each of the four states, we chose one relatively large city (San Jose, Des Moines, Miami, and Philadelphia) and one smaller- to medium-size city (Fresno, Sioux City, Jacksonville, and Scranton), because we assumed that the scale of communities might affect interactions among programs. We also tried to identify communities that are geographically distinct and encompass clearly bounded labor markets, rather than communities that are part of a labor market extending over multiple areas and political jurisdictions. The logistical difficulties of identifying sources of

training in areas where individuals and firms might call upon a variety of far-flung communities made this a desirable criterion.³

Our eight sample communities vary in their demographic and industrial composition. Miami, Fresno, and San Jose have large numbers of immigrants, while the Iowa and Pennsylvania communities have relatively few; Scranton, Jacksonville, and Sioux City are overwhelmingly white, while the other five communities have sizable minority populations. Fresno and Sioux City have agricultural bases; San Jose has a great deal of high-technology design and manufacturing; Miami depends heavily on financial services and tourism; Philadelphia has a heavy concentration of insurance and financial services; Scranton and Jacksonville are shifting away from manufacturing to a greater concentration on retail and financial support services. Although intensive case studies of a few communities cannot be used to generate a sample representing all the possible dimensions of variation across communities, our eight-community sample includes significant variation in size, economic base, demographic composition, and rates of economic growth.

An overview of the institutions providing work-related education and training in each of the eight communities and the extent of interaction among them is summarized in the Appendix.

We collected data on the eight communities between November 1989 and February 1990. Site visits lasted from four to eight person-days—enough time to obtain a relatively clear picture of the types of institutions providing work-related education and training and the interactions among them, though not enough time to examine each institution in great detail.

Data Collection

In each community, we interviewed principals, counselors, and teachers involved in secondary vocational education; administrators and instructors at community colleges and regional vocational/technical facilities; JTPA administrators and providers; welfare administrators; and a small sample of employers who either have received publicly funded job training services or are major employers of persons trained in local institutions. In each community, we also interviewed at least one individual who could provide an overview of the local labor market and the role of each training institution in preparing workers for that market (e.g., staff from the local economic development agency, representatives of the chamber of commerce or a business-education group). These structured but open-ended interviews averaged between 45 and 90 minutes.

³However, San Jose and Philadelphia are not especially well-bounded communities, since the labor markets in these areas spill into adjacent suburbs and surrounding cities; and the Miami area, while clearly bounded, comprises multiple political jurisdictions.

Our overriding purpose in all interviews was to learn how different types of local communities and labor markets organize education and training services, and how they respond to federal and state policies. Individual interviews focused on the specifics of the education and training programs offered—enrollment levels and composition, funding sources, types of services, and the nature of data collected on program performance. We also explored the effects of specific federal and state policies on local program offerings and the kinds of students who enroll. Other questions focused on the formal and informal relationships formed by local institutions, the extent of competition among them, the incentives and barriers to coordination, and whether formal or informal divisions of labor had been established.

Though the study of work-related education and training systems is in its infancy, this kind of analysis needs to be further developed to increase understanding of institutions that otherwise may seem chaotic and may appear to be operating at cross-purposes.

We drew on three additional sources of information: (1) a fifty-state survey of education and training policies that both guided our sample selection and helped us understand the interaction between policies initiated by higher governmental levels and the local institutions charged with implementing those policies; (2) a series of state and local case studies analyzing the extent of cooperation among vocational education, JTPA, and welfare to-work programs (Grubb, Brown, Kaufman, and Lederer, 1989, 1990), with additional information about interdependencies among these programs in a larger sample of states and localities;⁴ and (3) a detailed case study of Pittsburgh (Bodilly and Menefee-Libey, 1989; Glennan, 1989). Although the third effort did not generate information directly relevant to our examination of local systems, it did suggest some of the major issues that should be considered in conducting a community case study.⁵

As we have indicated, our eight community case studies are limited both in the depth of information they provide about individual education and training institutions and in their generalizability to the full range of localities and labor markets across the country. However, our intention is to demonstrate the value of looking at work-related education and training as systems of interacting institutions and programs. Though the study of work-related education and training systems is in its infancy, this kind of

⁴These case studies were selected to provide illustrations of exemplary coordination, rather than a more nearly random sample, and they typically concentrate on the interactions between two programs—e.g., a JTPA program and a community college—in a local area, rather than interactions among the entire complex of work-related education and training programs.

⁵The National Assessment of Vocational Education (NAVE) commissioned a series of earlier case studies of vocational education in a number of communities, including Greenville, San Antonio, Chicago, and a metropolitan area in California. These studies used local authors to gather information, presumably because of the low cost of obtaining information in this way; but the lack of a standardized protocol and the resulting lack of consistency in the information collected, along with the absence of central questions driving the investigation, made it impossible to draw any general conclusions from them.

analysis needs to be further developed to increase understanding of institutions that otherwise may seem chaotic and may appear to be operating at cross-purposes.

Section 2 describes the kinds of education and training institutions operating in the eight sample communities and their basic similarities and differences. It also outlines the major patterns of institutional interaction we observed. In Section 3, we analyze eight critical factors that explain differences in how education and training systems are configured across local communities. Finally, Section 4 explores the implications of the variation in local systems for the effectiveness of state and federal policies and the performance of local institutions.

ORGANIZATION OF THE REPORT

2. LOCAL SYSTEMS OF EDUCATION AND TRAINING: PATTERNS AND VARIATIONS

The institutions that exist in each of our eight sample communities and their basic functions are remarkably similar. Federal legislation such as the JTPA program has created funding mechanisms and regulations that encourage relatively standard practices, even though considerable variation is possible (if often unexercised) in both state policies and local practices. On the other hand, where secondary schools and community colleges have emerged from a history of local control, one might expect to see radically different kinds of institutions in different communities. Yet national movements, state policies, and emulation have led to educational institutions with remarkably similar purposes and strategies. Most of the programs we examined have become well-established, with highly regularized practices, clear similarities from place to place, and well-established identities within their communities.¹ In a few cases, however, this has not happened—some programs, such as welfare-to-work programs, are still developing, and adult schools vary substantially from place to place.

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Local communities do show considerable variation in the relationships education and training institutions have established with each other and in the ways basic education and training services are apportioned among institutions. In this section we shall examine the interactions among programs that give local systems whatever coherence they may have. Before doing so, however, we shall attempt to clarify the similarities among those institutions that constitute the work-related education and training system.

¹It is difficult to draw a clear distinction between "institutions" and "programs." Conceptually, differentiating between the two seems straightforward. Education and training institutions are ongoing organizations established to provide services to clients—e.g., secondary schools, community colleges, technical institutes, CBOs. Their funding and service mix may be defined by the programs they operate, but they typically have an organizational life independent of any single program. Programs, on the other hand, are sets of funding and regulatory mechanisms that derive from specific federal, state, and local policies—e.g., vocational education, JTPA, JOBS. These programs are typically implemented in different localities by several different institutions.

However, these distinctions break down in practice. For example, JTPA is a program, and most local service delivery areas (SDAs) contract with education and training institutions to deliver program services. Nevertheless, SDAs and the Private Industry Councils (PICs) that guide them have relatively well-defined purposes, a set of organizational processes, and criteria about the forms of training they can support. Furthermore, JTPA has a general philosophy that distinguishes it from longer-term, more specialized post-secondary vocational education. Therefore, one might argue that JTPA has institutional qualities, even though it does not have the history, stability, or clearly identified buildings that one associates with institutions such as high schools or community colleges.

Consequently, although we acknowledge that there is some distinction between institutions and programs, we often use the two terms interchangeably in this report.

In most communities, enrollments in secondary vocational education have declined, partly because of the continuing low status of vocational education and the emphasis placed on academic achievement during the 1980s, but also as a result of state policies. In all four of our sample states, increased graduation requirements have reduced enrollments in vocational programs. In addition, Pennsylvania has instituted a requirement that all vocational programs must be scheduled in three-hour blocks; the requirement was intended to make vocational programs more coherent and intensive, but it has also made it more difficult for students to enroll in those programs and still meet academic course requirements. Florida has clearly signaled that secondary vocational education should become general rather than job-specific. Although the state has not developed any policies to enforce this philosophy, aside from funding a few pilot projects, there is clearly no state-level support for continuing traditional job-specific vocational education.

As a result, vocational offerings in most comprehensive high schools have typically dwindled to a few typing classes and other business-oriented classes, some home economics, agriculture in rural schools, and perhaps one or two courses in industrial arts or technology. It is difficult to find coherent sequences of courses in many specific occupational areas. Those school districts that have worked to preserve their vocational programs have done so by concentrating their resources in a few locations—for example, Des Moines has located most of its vocational programs in one central high school, Fresno has created a magnet vocational school, Scranton has a technical high school, and Philadelphia operates an academy program.²

Similarly, in many states, area vocational schools, which students typically attend for a half-day a week during their last two years of high school, dominate the secondary vocational offerings. Both Fresno and San Jose have Regional Occupational Programs (ROPs)—California's version of area vocational schools; Scranton has a half-day AVTS; and Philadelphia three full-time AVTSs.³ While enrollments are difficult to measure consistently, these specialized vocational programs are clearly

LOCAL EDUCATION AND TRAINING INSTITUTIONS

Secondary Vocational Education

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²Academies are schools-within-schools that typically combine three academic teachers and one vocational teacher who stay with cohorts of students for two or three years. On the Philadelphia academies, see Snyder and McMullen (1987). The academy program is viewed primarily as an intervention for at-risk students that includes an "occupational hook." The academy program in Philadelphia is thus a vehicle for carrying out the district's policies for assisting at-risk students, rather than a specific approach to delivering vocational education. Similarly, Fresno's vocational magnet school is designed as a way to meet desegregation goals.

³In Pennsylvania, fifteen AVTSs operate full-day programs where students take both their vocational and academic courses, and there are fifty-five half-day or "week-about" programs. In the week-about programs, students attend alternate weeks at the AVTS and the home school where they take their academic courses. In addition to its three full-time AVTSs, Philadelphia also operates week-about skills centers.

quite small: The Lackawanna AVTS near Scranton enrolls about 170 students from Scranton, while the district has 4,100 secondary students; AVTS enrollments in Philadelphia represent about 10 percent of the total secondary student population; and the Regional Occupational Center (ROC) near San Jose enrolls 400 of the 8,100 secondary students in the San Jose Unified School District.

With the exception of a few courses within comprehensive high schools, secondary vocational education has moved into specialized schools that appeal to a relatively few students who elect a coherent series of courses in specific occupational areas.

In many ways, area vocational schools are functionally equivalent to magnet vocational schools or high schools in which vocational courses have been concentrated: Because students must specifically elect to attend the vocational institutions, they are self-selected in a way that students choosing courses in a comprehensive high school are not. The students in these institutions are also more likely to take a coherent sequence of courses in one occupational area, rather than the smattering of unrelated courses typical of vocational education in comprehensive high schools.⁴ With the exception of a few courses within comprehensive high schools, secondary vocational education has moved into specialized schools that appeal to a relatively few students who elect a coherent series of courses in specific occupational areas.

The secondary vocational programs that do remain have no competitors: With very few exceptions, they are the only work-related programs in the community that are available to high school students. Their major "competition" is the academic program of the high school. In this sense, high schools occupy a specialized and protected niche in the education and training system, one defined by the age of their students. As we shall see, they often have extensive relationships with other institutions, especially community colleges and (in some places) adult schools, but because of their captive audience, they have no need to compete with other institutions or to be entrepreneurial.

Community Colleges

Publicly funded community colleges are now relatively ubiquitous—almost all regions of the country include a community college. Of our eight sample communities, only Scranton lacks a public community college. Scranton, however, has a private, nonprofit technical school with a long history and a strong reputation—the Johnson Technical Institute—which has made the establishment of a community college seem redundant, at least for vocational purposes. In addition, students from Scranton can attend Luzerne Community College about 20 miles away; but since one of the attractions of the community college (relative to other

⁴For example, only 40 percent of students who call themselves vocational students take three or more occupationally specific courses. For this and other evidence on the extent of "milling around" of students in most high schools, see Hoachlander and Choy (1986).

institutions of higher education) is its proximity, even this relatively small distance reduces its availability to potential students in Scranton.⁵

Although community colleges vary in their mix of academic and vocational courses, by state policy and local preference, almost all offer a broad range of vocational programs leading to both Associate degrees and certificates. Even the City College of Philadelphia—whose former president had for years stressed the importance of academic courses designed to facilitate transfer to four-year colleges—offers extensive programs in allied health and technical occupations. In the hierarchy of vocational education programs, those offered by community colleges are clearly at the top: They are longer than those offered by other institutions, they are more intensive, and they have relatively more courses in sophisticated and capital-intensive areas such as electronics, computing, and computer-assisted design. They also have more extensive requirements for related academic coursework. In most communities, community colleges are the only providers of postsecondary credit courses (i.e., courses that can be used to fulfill requirements for Bachelor's degrees). However, student preferences can readily convert the extensive vocational programs offered by community colleges into short-term programs, particularly if large numbers of students leave before the end of a complete program.⁶ In this sense, the offerings of community colleges overlap those of other institutions that provide shorter, noncredit vocational courses.

In addition to regular Associate degree and certificate programs, many community colleges offer programs for JTPA clients and welfare recipients. Some of these individuals enroll in regular programs, and some enroll in special courses established specifically for them—which include more remediation, counseling, and support services than are provided to other students. Such special courses have become quite common in community colleges.⁷ In addition, many colleges offer a variety of courses for specific firms, typically referred to as customized training. Custom-

In the hierarchy of vocational education programs, those offered by community colleges are clearly at the top: They are longer than those offered by other institutions, they are more intensive, and they have relatively more courses in sophisticated and capital-intensive areas such as electronics, computing, and computer-assisted design.

⁵The lack of a community college in even this one city was apparently the result of unforeseen circumstances: Pennsylvania had plans for 28 community colleges throughout the state but stopped building when only 14 campuses were completed because of a lack of funding. Efforts are now being made to ensure that every community in the state is served by either a community college or an AVTS.

⁶On the tendency of students not to complete community college programs, see Grubb (1989a, 1989b). Because of their inability to control students' coursetaking behavior, community college officials typically cannot readily assess how many of their vocational students are enrolled in Associate degree programs, certificate programs, and shorter non-credential programs.

⁷In a national sample of community colleges, undertaken jointly by the NCRVE and the American Association of Community and Junior Colleges, 95 percent reported providing some kind of contract training, 71 percent of which was for private firms. About 70 percent of the colleges were represented on the PIC, and 53 percent received funds from JTPA for some form of training, remediation, assessment, or counseling. For other evidence on the relationships among community colleges, JTPA, and welfare programs, see Grubb, Brown, Kaufman, and Lederer (1989, 1990).

The development of programs for JTPA and welfare recipients and the assumption of economic development activities reflect the entrepreneurialism that is present in many (though not all) community colleges.

ized training programs are usually relatively short, lasting anywhere from several hours to a few weeks, and many of them are created by modifying existing courses to fit the needs of a particular firm. The Iowa community colleges are especially active in customized training because of a unique state program allowing them to generate bond revenue for this purpose. The community colleges in Jacksonville, Miami, and Fresno are also quite active, incorporating divisions that have responsibility for customized training, responding to requests from business, and aggressive recruiting of clients for customized training.

The development of programs for JTPA and welfare recipients and the assumption of economic development activities reflect the entrepreneurialism that is present in many (though not all) community colleges. They are potentially in competition with other providers of training; at the same time, the programs create a wider variety of vocational offerings within community colleges for a wider range of students. This conception of the community college role is not universal. For example, the Community College of Philadelphia (CCP) is strongly dedicated to promoting transfers to four-year colleges and is decidedly less entrepreneurial than the other community colleges in our sample.⁸

Area Vocational Schools and Adult Schools

Many AVTSs are hybrid institutions. Most of them were established in the 1960s and 1970s as secondary institutions to provide richer vocational programs than individual high schools. However, many began serving adult students in the 1970s and 1980s, usually in relatively short, non-credit programs. As a result of dwindling enrollments in secondary vocational education and expanding adult enrollments, most AVTSs have become predominantly adult institutions. In Fresno and San Jose, about half of the students enrolled in AVTSs are adults; the AVTSs in Philadelphia and Scranton are unusual in that they have only a few adult students.⁹

⁸Although CCP is more academically oriented and less entrepreneurial than some community colleges, it does offer 30 to 40 job training courses each semester, customized to the needs of specific private firms and local government agencies. It also runs Step Up, an experimental program that places welfare recipients in regular CCP classes and provides them with support services and considerable personal attention. Step Up has received national visibility and is expected to become a model program for integrating welfare recipients into regular community college courses.

⁹Whether AVTSs have been able to compensate for the loss of secondary students depends largely on the way they are funded. California and Pennsylvania represent contrasting cases. In California, adult students enrolled in ROC/Ps are funded on the same basis as secondary students. As a result, ROC/Ps such as the one in Fresno have been able to maintain stable enrollments over the past decade; as the number of secondary students has declined, adult enrollments have taken their place. The situation is quite different in Pennsylvania. There, state reimbursement for a secondary student is \$1,800 a year for a three-hour course sequence. The AVTSs receive no state reimbursement for adults who attend during the day, and they receive \$3.20 per teacher-hour for evening classes that enroll adults (i.e., \$230 for a class that costs the AVTS about \$864). As a result, the AVTSs

Area vocational schools are by no means ubiquitous; only five of our eight communities, for example, have them. (Des Moines, Sioux City, and Jacksonville have no AVTSs.) However, in some communities, the kinds of programs usually provided by AVTSs are offered by vocationally oriented adult schools. Most of these are operated by school districts and offer relatively short, noncredit courses in remedial education and General Equivalency Diploma (GED) preparation, English as a Second Language (ESL), avocational and hobby courses, and various vocational offerings. In some states, such as California, local districts may choose whether or not to operate adult schools, so the presence or absence of such institutions is a matter of local option. In others, the location of adult schools is determined by state policy: For example, school districts in Florida operate adult schools in 14 counties, while in the remaining 14, community colleges offer noncredit adult education and school districts operate no adult schools.

As a result of dwindling enrollments in secondary vocational education and expanding adult enrollments, most AVTSs have become predominantly adult institutions.

Vocational programs in many adult schools look quite similar to those of AVTSs. In Miami, the Dade County School District operates 22 adult schools, of which one is an aviation school and five are specialized technical schools or skill centers offering relatively short, noncredit courses in such areas as business, marketing, real estate, secretarial skills, automotive mechanics, and air conditioning maintenance and repair. These programs are less intense than the Associate degree programs of the community colleges.

Technical institutes also provide postsecondary vocational education. Publicly funded technical institutes generally offer longer, more intensive vocational programs—including two-year programs leading to Associate of Science or Associate of Applied Science degrees, similar to those offered in comprehensive community colleges—as well as shorter certificate programs. They differ from community colleges in their concentration on vocational offerings and their relative lack of academic courses, except for those that are necessary adjunct to vocational programs. Not surprisingly, given the missions of these institutions, very few students from technical institutes transfer to four-year colleges (Grubb, Brown, Kaufman, and Lederer, 1990). Because the purposes of technical institutes are more specific than those of comprehensive community colleges, they tend to attract students with clear career goals. Community colleges, on the other hand, attract many students who can be considered “experimenters,” unsure of their plans or of their interest

**Technical
Institutes**

must charge adults tuition ranging from several hundred dollars per year up to several thousand dollars for expensive programs such as respiratory therapy. Because most of the adults who are attracted to such programs have low incomes, this cost is a significant barrier to participation (although financial aid such as Pell grants can be used to cover some of the cost).

in postsecondary education (Manski, 1989; Grubb, 1989a). Publicly funded technical institutes are state creations and therefore exist primarily in the South, where they have been established as a matter of policy.¹⁰

Our sample communities do not happen to contain any publicly funded technical institutes. Unfortunately, therefore, we were unable to clarify the specific role of technical institutes in the constellation of vocational education and job training, although we suspect they play roles quite similar to those of the vocational programs of comprehensive community colleges.¹¹

JTPA Programs

All JTPA programs operate under common federal regulations that dictate who is eligible, what services can be provided (including classroom skills training, OJT in firms, basic or remedial education, and various support services such as child care and transportation), and performance standards that local programs must meet or exceed (National Commission for Employment Policy, 1987). Most local JTPA programs operate not by providing services directly, but by contracting with other institutions, such as community colleges, adult and area vocational schools, CBOs, proprietary schools, firms providing OJT, and unions. The use of performance-based contracts, in which service providers are paid only when JTPA clients attain specific goals, such as completion of a program or placement in a job, is quite widespread; these contracts serve to shift the risk of achieving performance standards from the local JTPA administrative agency to service providers.

Despite key similarities due to federal policy, local JTPA programs differ in emphasis, because of the latitude the JTPA legislation gives them concerning which clients they serve and which services they provide. The programs in our sample fell into four categories. *Bureaucratic programs* tend to be most concerned with meeting performance standards and other regulatory requirements of the JTPA legislation. They are most likely to offer short, inexpensive programs (such as OJT), which make it easier to meet performance standards. The SDA subcontracts with providers are almost always performance-based. Such programs are probably also the most likely to "cream," or enroll the most job-ready

¹⁰There has been a marked tendency toward what might be termed "institutional progression," where vocational schools become technical institutes, which may then add academic programs and become comprehensive community colleges. For example, technical institutes in South Carolina have recently been granted the right to add academic programs and award transfer-oriented Associate degrees.

¹¹Students in community colleges share many behaviors with students in technical institutes, except for transfer to four-year colleges. Technical institutes are more likely to award certificates rather than Associate degrees, although the tendency for students to drop out of both institutions—and therefore to take relatively truncated programs—is about the same (see Grubb, 1989a, 1989b).

eligible applicants, rather than those who are least prepared for employment and therefore likely to be hardest to place.¹²

Political programs tend to be driven by local politics, especially the political influence that CBOs wield. The main concern in these programs is to provide subcontracts to the most powerful CBOs; there is much less concern for either the appropriate mix of services or the well-being of clients. These programs are sometimes described as "client-driven" (Cook et al., 1985; Grinker & Associates, 1986), supporting a relatively stable group of CBOs year after year, unlike more independent programs that have no qualms about eliminating funding to local providers who do not perform well.

Corporate programs are business-oriented: Firms, rather than individuals, are their main clients. They are also more likely to emphasize firm-based OJT—which often looks like a method of providing wage subsidies to firms rather than a vehicle for serious training (Grubb, Brown, Kaufman, and Lederer, 1990; Kogan et al., 1989).

Finally, *client-centered programs* are strongly committed to improving the lives of their clients. Designers of these programs are more likely to try various ways of accommodating performance standards while still developing experimental approaches or courses specifically designed for high-risk individuals. They are also more likely to provide longer-term training (including classroom training and remediation) rather than short-term OJT, recognizing that many of those clients most in need of assistance have employment barriers too substantial to overcome in six months or less.

These four different approaches lead to considerable variation in the kinds of services provided and in the clients served. As discussed below, they also lead to differences in the relationships between local JTPA programs and other education and training institutions.

A variety of CBOs exist in most (but not all) localities. Many are wholly supported by JTPA funds and governmental subsidies for other education and training programs, such as Adult Basic Education (ABE) or workers' rehabilitation, and social services. There are more CBOs in urban areas than in rural areas, partly because of simple economies of scale

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Community-Based Organizations

¹² Creaming in JTPA programs is a subject of great debate. For evidence that creaming does occur, see U.S. GAO (1989). Without better data than we could collect on the composition of local JTPA-eligible populations, it is impossible to confirm our suspicion that "bureaucratic" JTPA programs are more likely than others to cream. However, administrators in such programs are more likely to speak about the need to enroll individuals who have at least some minimal skill levels.

and partly because the groups represented by many CBOs—particularly racial and ethnic groups—are concentrated in cities. A few CBOs, such as SER-Jobs for Progress, a Hispanic organization, and Opportunities Industrialization Center (OIC), a black organization, are national in scope and have offices in multiple communities. Most, however, are purely local, and many represent a particular constituency—Hispanics, blacks, an Asian community, a specific neighborhood, the handicapped, older women, or displaced workers. Many CBOs display a client-centered approach and make valiant efforts with scarce resources to do what they can for groups that otherwise have marginal access to labor markets. Many are also quite entrepreneurial, since they depend on public funds for which they must normally compete. Some are quite powerful politically, with strong supporters among local politicians, and are therefore able to influence the allocation of training and social service funds, at least in communities with politically oriented JTPA administrations.

...many CBOs are adept at certain activities...and [they] give the education and training system a flexibility and responsiveness that would not otherwise exist.

Since they are dependent on public funds—especially JTPA resources—CBOs are typically not independent providers of work-related education and training; that is, they would not exist (or they would be much smaller) in the absence of JTPA and other public programs. The CBOs operate in several distinct capacities within the education and training system. They compete with community colleges and AVTSs in areas where public funds are available through request for proposal (RFP) mechanisms; they stand ready to fill gaps in the education and training system, as long as public funds support such efforts; and they usually specialize in some way, often representing groups of individuals who have no other advocates. In particular, many CBOs are adept at certain activities—especially the recruitment of eligible individuals, counseling, and job placement—and are used by JTPA programs to provide services that educational institutions are less able to deliver. In general, CBOs give the education and training system a flexibility and responsiveness that would not otherwise exist.

Welfare-to-Work Programs

The current welfare-to-work programs have developed from an enduring concern with putting welfare recipients to work. From the punitive approach associated with "workfare" programs, requiring work as a condition of receiving welfare, and the "services strategy" developed during the 1960s, which provided support services such as child care and transportation to enable welfare recipients to return to work, a kind of hybrid has emerged. The current welfare-to-work programs provide various services to facilitate employment, with recipients who are required to participate threatened with the termination of welfare payments if they do not. Since a defining characteristic of the welfare system has been its variability among states, it is not surprising that the welfare-to-work programs developed since the early 1980s—and those now being established under the Family Support Act of 1988—vary enormously.

Some states have defined specific sequences of services. For example, California requires that welfare recipients follow a specific pattern from initial appraisal, to basic education (if needed) and job search, to assessment, vocational training, OJT, work experience, supported work, or some other form of education and training (Riccio et al., 1989), although it allows counties great leeway in how these services are provided. Florida's Project Independence is nominally a state program with local offices that do not have independent decisionmaking power; it concentrates on remediation, job clubs, and OJT provided through JTPA. Other states have specified the institutions that will provide services; for example, Iowa requires that local offices of the Department of Employment Security provide orientation, remediation, job search assistance, and placement services, while local JTPA programs provide training.

Even in states that have made a considerable investment in welfare-to-work programs (e.g., California is spending about \$200 million annually), only a small proportion of the eligible population is being served. For example, only 5 percent of the mandatory population is enrolled in Pennsylvania's demonstration program. In California, about 30 percent of those receiving Aid to Families with Dependent Children (AFDC) are enrolled in GAIN. However, an evaluation of GAIN's first two years by the Manpower Demonstration Research Corporation (Riccio et al., 1989) found that of 100 typical registrants, 66 either did not attend even an orientation or did not participate in any program component. About 11 percent received education or training and another 14 percent received instruction in basic academic skills. Although the Pennsylvania program has a lower proportion of enrollees, an evaluation of its first two years found that participation in occupational skills training ranged from 11 percent to 45 percent across the initial ten local sites (an average of 31 percent), and participation in remedial education ranged from 8 to 31 percent (averaging 17 percent) (Finkel et al., 1990). About 30 percent of those enrolled in Florida's Project Independence are receiving training, while the remainder, largely because of funding constraints, are considered "job ready" and receive only job search assistance and support services.

By and large, state welfare-to-work programs are so new that it is not yet clear what they will look like when they are fully implemented in local communities. In states whose welfare-to-work programs predate the Family Support Act (such as California, Florida, and Pennsylvania), implementation has been slow and uneven. In other states (such as Iowa), the programs required by federal legislation did not have to begin until Fall 1990.

Still, some patterns have emerged, including a strong tendency to use existing institutions to provide services. In particular, many welfare offices have turned over part or all of their services to local JTPA programs,

From the punitive approach associated with "workfare" programs, requiring work as a condition of receiving welfare, and the "services strategy" developed during the 1960s, which provided support services such as child care and transportation to enable welfare recipients to return to work, a kind of hybrid has emerged.

Welfare-to-work programs are unlikely to add to the proliferation of education and training institutions, but will instead serve as a funding mechanism to add new kinds of clients and programs to existing institutions.

though there has also been extensive use of the adult education system for remediation and (in some places) of postsecondary vocational institutions for vocational skills training (Grubb, Brown, Kaufman, and Lederer, 1990). Welfare-to-work programs are unlikely to add to the proliferation of education and training institutions, but will instead serve as a funding mechanism to add new kinds of clients and programs to existing institutions. A second clear pattern is substantial variation in the resources states are committing to these programs—paralleling, in all likelihood, the variation among states in basic AFDC funding. Some states—notably California, which provides funding to community colleges, area vocational schools, and adult schools to cover costs for welfare recipients—have been relatively generous. Others have provided relatively little support and few incentives for existing institutions to participate; in these states, participants are likely to receive little more than job search assistance.¹³ While welfare-to-work programs are major new additions to the education and training system, their variability means that they will be relatively unimportant in at least some communities.

**Proprietary
Vocational
Schools**

The communities we examined, like most medium-sized and large cities, have significant numbers of proprietary vocational schools. For example, Philadelphia has 55 and San Jose has 30. The only exception is Sioux City, whose relatively small size and dominant community college appear to have reduced the number of proprietaries.

Most proprietaries are highly specialized, providing short-term, intensive programs in a single subject or a few related subjects, such as secretarial and clerical training, computer programming, certain trades, truck driving, and cosmetology. While there is clearly substantial overlap between the offerings in proprietary schools and those in publicly provided vocational education, many proprietary schools offer training in areas where few academic competencies are involved, such as cosmetology, truck driving, and the trades—occupations often avoided in community colleges and technical institutes. In addition, proprietaries sometimes develop highly specialized training; in Philadelphia, for example, one proprietary institution trains JTPA clients in cable rigging for cable television companies.

¹³Pennsylvania estimates that its Joint Jobs program costs about \$4,500 per participant. However, because of high attrition among participants, if the cost is denominated by the number of participants who actually complete the program and obtain jobs, the estimate rises to \$10,000. In contrast, some states are spending less than \$1,000 on education, training, and related services for each welfare recipient participating in their JOBS program.

Most public funding for proprietaries flows through the federal student aid system,¹⁴ rather than through education and training funds administered at the state and local levels. In addition, proprietaries provide some training for JTPA and welfare programs, although, because of their relatively high costs, they usually do so only when a client wants a training program that is not offered by a CBO or public educational institution. In addition to their relatively high costs, proprietary schools typically have very poor reputations among public education and training providers (although it must be noted that a few have strong reputations and high profiles). Administrators in public educational institutions and JTPA programs in our eight communities repeatedly disparaged proprietary schools as ripoffs and "Pell mills." Proprietary schools' recent practice of recruiting AFDC recipients near welfare offices has also earned them the enmity of welfare administrators. Some JTPA and welfare programs simply refuse to use proprietary schools. Therefore, proprietaries are generally institutions of last resort, used to fill gaps where public institutions have no offerings. Yet, like CBOs (though for very different reasons), they provide additional flexibility and responsiveness to the education and training system, since they are highly entrepreneurial and willing to fill any training gap as long as there are public funds to do so.

While there is clearly substantial overlap between the offerings in proprietary schools and those in publicly provided vocational education, many proprietary schools offer training in ... occupations often avoided in community colleges and technical institutes.

Firms provide a great deal of their own training, both in informal, on-the-job settings and in more formal programs that occur away from the place of production. A portion of this training is publicly funded through the Targeted Jobs Tax Credit. However, with the support of OJT by JTPA, the funding of customized training through many state economic development programs, and the use of OJT and work experience in welfare-to-work programs, firms provide an increasing amount of training within federal and state job training programs. Most of this training appears to be quite short; periods of four to six weeks are common,¹⁵ compared with the ten to twenty weeks typical of even short-term vocational training.

**Firms as
Providers of
Publicly
Subsidized
Training**

In a sense, firm-based training is completely unlike any other training provided in public programs, since it takes place on the job in the context of actual production, rather than in classroom settings. However, it is in several ways a potential substitute for, and therefore a competitor of,

¹⁴Proprietary vocational schools have become adept at obtaining student aid; students in such schools received about 25 percent of the student federal aid provided in 1986, even though the schools enrolled only 5.4 percent of all postsecondary students and 7.7 percent of low-income students (see Grubb and Tuma, 1991).

¹⁵See, for example, the firm-based training surveyed by Kogan et al. (1989).

classroom-based vocational skills training. A JTPA or welfare-to-work program can elect to provide either OJT within firms or classroom training in educational institutions, and indeed some local agencies allocate the vast majority of their resources to OJT. Several state economic development programs—notably those in California and Massachusetts—have deliberately supported relatively large amounts of firm-based training because of the perceived deficiencies of community colleges and technical institutes.¹⁶ Thus, firms are potential competitors with public educational institutions and CBOs.

The central question for firm-based training is whether it is real training or merely a form of short-term work experience for the client, providing short-term wage subsidies for the employer. In some communities, including Miami and Scranton, local economic development agencies and chambers of commerce include JTPA as a potential source of support when they try to lure new employers into the area. This suggests that the business community views JTPA more as a wage subsidy to firms than as a source of training for underemployed workers. A review of training programs in thirty SDAs revealed great variation in OJT. About 55 percent of OJT placements provided very little direct training (although in some cases, learning did take place simply through experience on a job); in only 25 percent was there evidence that OJT increased access to training over what the employee would have received without JTPA (Kogan et al., 1989).¹⁷ Some firms do provide real training, but in many, what is called training is little more than a wage subsidy.

RELATIONSHIPS AMONG INSTITUTIONS

The relationships among these different institutions, rather than their individual identities, create local systems of work-related education and training. There is potentially a great deal of overlap among their programs—many offer relatively short, nondegree skills training, for example, and a few occupational areas (e.g., secretarial and clerical, health, the trades, computers and electronics) are common in all vocational education and job training programs. Therefore, the possibility exists either for duplication—the fear uppermost in the mind of Congress when it requires coordination of federal programs—or of competition in some form.

¹⁶However, the majority of state economic development programs operate through community colleges and other existing education institutions (see McDonnell and Grubb, 1991).

¹⁷For corroboration of this view, see also Grubb, Brown, Kaufman, and Lederer (1990) and Legislative Analyst (1986).

The organizational-theory and public-management literature suggests that overlapping activities and duplicating functions among agencies is not always wasteful. Under the right circumstances, such redundancy not only allows errors to be detected more easily, it can also make the overall policy system more flexible and able to generate new alternatives (Wilson, 1989; Landau, 1969). The challenge is to create conditions that facilitate the beneficial effects of redundancy and avoid its inefficient aspects.

The relationships among these institutions, rather than their individual identities, create local systems of education and training.

In his case studies of public managers at the federal level, Philip Heymann (1987) argues that an agency can respond to shared mission and responsibilities in either of three ways. First, it can seek the benefits of cooperation, such as better results, greater legitimacy, and stronger external support, by allying itself with one or more agencies in an ongoing set of activities or a single endeavor. Second, it can decide that the prospects for cooperation are not good, and therefore jurisdictions should be clearly defined and distance maintained. Or, third, it may decide that its role and activities are too similar to those of others to be anything but rivals, with the future of each agency dependent upon a competitive display of capacity and client responsiveness (Heymann, 1987: 100). Although Heymann's three scenarios of cooperation, division of labor, and competition are meant to apply to federal agencies, one could imagine local education and training institutions responding to their overlapping missions in much the same ways.

Other research has found that four factors typically guide administrators in their dealings with other agencies: (1) the need to maintain their established programs; (2) the need to preserve functions that are unique to the agency or that ensure its autonomy; (3) the need to maintain a reliable flow of resources; and (4) the need to preserve the agency's paradigm or traditional way of doing things (Benson, 1978). This suggests that congressional concern about inefficient duplication or competition may not be entirely unfounded. Nevertheless, these are not the only responses local institutions may have to overlapping missions. Under some conditions, education and training agencies will view either cooperation or a clear division of labor as a way to maintain individual autonomy and resource bases.

The challenge is to create conditions that facilitate the beneficial effects of redundancy and avoid its inefficient aspects.

Indeed, we did find some competition in local education and training systems, but surprisingly little. Competition typically takes one of two forms. The first kind is simple competition for students, where one institution will establish a program designed to lure students from another institution. Entrepreneurial institutions, particularly those whose revenues (from both state subsidies and tuition) are dependent on enrollments, have clear incentives for such student competition.

The second kind is a form of price competition. When JTPA administrators decide to provide a particular service (such as vocational skills training) for a particular group of eligible clients, they typically circulate an RFP inviting CBOs and educational institutions to compete. To some extent, potential providers compete on quality criteria, based on their reputations, prior success in JTPA, or claims about their abilities to serve a particular client group. In addition, however, some providers can offer programs at lower cost than others. For example, community colleges usually receive state subsidies on the basis of enrollments, and JTPA clients generate additional subsidies. Thus when colleges compete for JTPA contracts, they need charge JTPA for only part of the cost, since state subsidies cover the rest. Consequently, community colleges can provide training at lower cost than CBOs, which in turn are cheaper than proprietary vocational schools. Community colleges sometimes acknowledge that they receive JTPA contracts because of their cost advantage, and CBOs complain because that cost advantage comes from public funds.¹⁸

In general, we found little evidence of overt competition among work-related education and training institutions, and very little overlap in services.

However, this kind of price competition does not always occur, and where it does, it may be limited. In California, community colleges have state-imposed limits on enrollment that can generate state subsidy, so additional enrollments from JTPA do not increase their revenues.¹⁹ In Florida, higher enrollments generate additional state funding only if they increase by more than 5 percent over a three-year period, so small increases in enrollment do not generate additional revenues. Thus the potential price advantage of community colleges varies with the specific details of state funding mechanisms.

In general, we found little evidence of overt competition among work-related education and training institutions, and very little overlap in services.²⁰ Indeed, in most communities, competition is considered very undesirable because of the disharmony and uncertainty that it can generate. Consequently, various mechanisms have been developed to fashion a division of labor. In some communities, local councils and coordi-

¹⁸On the other hand, some of the community colleges in our sample argued that it is difficult to be cost-competitive with CBOs because they are subject to such factors as union contracts, credentialing requirements, and the necessity to offer low-enrollment programs, all of which raise their costs in ways that CBOs can avoid.

¹⁹The situation is still more complex in Fresno, where many JTPA and welfare clients are enrolled in the noncredit programs of the Vocational Training Center (VTC). Because the state reimbursement for noncredit courses is lower than reimbursement for credit courses, an additional JTPA or GAIN student at the VTC generates less revenue than a student enrolled in vocational courses offered for credit—thus eliminating the institutional incentive to expand participation in JTPA and GAIN.

²⁰This finding duplicates the conclusion in Grubb, Brown, Kaufman, and Lederer (1989, 1990) that, contrary to conventional wisdom and congressional belief, there is surprisingly little duplication of services between vocational education and JTPA programs.

nation bodies have eliminated competition. For example, educational institutions in the Fresno area all meet regularly to coordinate their activities. They have not only developed articulation agreements between the high schools and the community college, but also a division of labor wherein the AVTSs and adult schools provide adult education and non-credit vocational education, while the community college provides longer-term certificate and Associate degree programs.

In Florida, state policy has produced a similar division of labor. In an effort to reduce competition between community colleges and adult schools, the state decreed that in fourteen areas (including Miami) non-credit education would be provided by adult schools, while community colleges would confine themselves to credit programs. Subsequently, a complex process (referred to as "leveling") allocated some occupational education to shorter, noncredit programs and other occupational areas—usually those with higher skill requirements or more academic prerequisites—to longer, credit programs. The school district and the community college district jointly publish a guide to vocational programs, clarifying that certificate and Associate degree programs are offered at the community college, while short, noncredit programs and single courses can be found in the adult schools. In the remaining fourteen areas (including Jacksonville), community colleges provide both credit and noncredit courses, and there are no adult schools, so in a different way competition has been eliminated.

Even in JTPA, where competition is inherent in the RFP process, various approaches limit the extent of competition among potential providers. In Fresno, for example, a division of turf is well-established: A small number of CBOs provide services to JTPA year after year, and usually only one organization bids on each RFP.²¹ In Sioux City and Jacksonville, the lack of CBOs and the dominance of the community college reduce overt competition in JTPA. Only in Miami and Philadelphia, which have more independent JTPA administrations, have substantial efforts been made to generate competition among potential providers and to choose providers on the basis of performance. Even there, however, neither the community college nor the adult schools are especially interested in bidding for JTPA contracts. In most of these communities, then, interinstitutional conflict is muted as a matter of policy or practice, or by the ways institutions have been structured.

Instead of competition among institutions, we find a rough stratification of programs providing work-related education and training, with divi-

Instead of competition among institutions, we find a rough stratification of programs providing work-related education and training, with divisions among institutions based primarily on types of programs and secondarily on types of clients.

²¹Indeed, the recent appearance of a local branch of a national organization that intended to compete for several JTPA contracts caused substantial turmoil; the problem was resolved by providing the newcomer with a small contract.

sions among institutions based primarily on types of programs and secondarily on types of clients. Community colleges provide the most sophisticated vocational programs, including two-year Associate degree programs and certificate programs that may last up to two semesters. Adult schools and AVTSs provide shorter, more intensive, entry-level skill training, open to all students but also serving JTPA and welfare clients; CBOs provide similar vocational programs, but usually to specific groups of JTPA clients rather than to the public at large. Firms provide short-term OJT in skills specific to their own needs, using quite different methods from those used in classroom vocational training. Community colleges provide some customized training for firms and other employers, but this too is different in purpose from other kinds of training.²² Along with coordination councils, state policies, and gentlemen's agreements, this kind of stratification reduces the extent of competition.

In seeking to minimize competition and establish either formal or informal divisions of labor, local education and training institutions adhere to patterns that might loosely be called models. A basic model of institutional relationships and three variations on it are described below.

The "Standard Model" of Local Systems

Although local communities vary considerably in interdependencies among education and training programs, certain patterns are common enough that we can define a "standard model" of interrelationships. In this model, high schools and community colleges provide vocational courses at different levels of sophistication to high school and adult students, respectively; articulation agreements between high schools and community colleges specify logical sequences of high school and post-secondary programs and, in some cases, allow community college credit for courses taken during high school. Area vocational schools and adult schools differ from community colleges in the level and duration of their vocational programs for adults. Also, communities with effective coordination councils establish articulation between short, noncredit vocational programs and the longer, credit programs of community colleges, again establishing a clear progression among institutions and a continuum of training for people preparing for positions at different levels.²³

²²There may be competition in customized training. A number of community colleges claim that they are in competition with the extension programs of four-year colleges, which also provide a variety of informal courses that they can customize for specific employers. However, since we did not include four-year colleges in our site visits, we cannot verify whether these perceptions of competition are accurate.

²³These articulation agreements must be worked out for specific occupational areas; thus, even where such agreements are extensive, they do not necessarily cover every possible vocational program area. For example, the ROC/P in San Jose has articulation agreements with San Jose City College in eight occupational areas: air conditioning, automotive, cabinetmaking, carpentry, drafting, electrical maintenance, electronics, and machining.

In the standard model, JTPA normally works with educational institutions in two ways.²⁴ JTPA programs support high school students who are at risk of dropping out by providing additional resources for remediation, counseling, and other support services, along with jobs in Summer Youth Employment programs. In these efforts, JTPA usually works with school officials to identify those most at risk of dropping out and to coordinate JTPA efforts with school activities and schedules. However, most of these programs enroll relatively few students, and they have not transformed the high schools in any significant way. A second and more important interaction between JTPA and educational institutions involves subcontracts between JTPA and community colleges, technical institutes, and AVTSs to provide classroom-based vocational skills training. The extent of this involvement varies: Among our eight communities, the community colleges in Sioux City and Jacksonville provided virtually all classroom skills training for the local JTPA program, while in Philadelphia and Miami the community colleges had largely withdrawn from JTPA, and CBOs were much more important. Still, subcontracting with educational institutions is common enough²⁵ that job training has become, in effect, a partnership between educational institutions (and their state and local funding) and JTPA, with federal funding.

Finally, welfare-to-work programs have begun to offer vocational training by subcontracting with local JTPA programs to provide some or all of their services. In turn, welfare recipients may end up in firm-based OJT in CBOs, or in the community colleges and technical institutes to which JTPA refers its own clients. But when the local JTPA agency is chosen to refer welfare clients to vocational training, those clients are likely to be referred to the shorter-term programs that JTPA sponsors, rather than the longer programs of community colleges and technical institutes. Shorter programs are more consistent with the incentive of most welfare programs, i.e., to get recipients into employment as soon as possible. In addition, in areas where resources for welfare-related education and training have been limited by state policy, funding for longer-term training is simply unavailable.

²⁴JTPA and educational institutions actually interact in many ways—Grubb, Brown, Kaufman, and Lederer (1989, 1990) outline eight different approaches to collaboration between JTPA and vocational education programs—but the two described here are by far the most common.

²⁵It is difficult to know how common this pattern is because there is no recent census of SDAs, and indeed many are unable to specify which institutions provide their services. However, the National Alliance of Business reported that 95 percent of SDAs have some financial agreement with a provider of vocational education (Brady and Balfe, 1987). A recent study of fifteen representative SDAs found that almost all of them depend on public educational institutions—community colleges, technical institutes, and skill centers operated by school districts—for their classroom training. In fact, only two of the fifteen SDAs relied heavily on proprietary schools, and none used CBOs for occupational skills training (Kogan et al., 1989, Ch. 2).

In the first [variation], educational institutions are closely coordinated but have limited interaction with JTPA and welfare-to-work programs; in the second, community colleges dominate all other institutions; and in the third, the institutions that constitute the education and training system are essentially autonomous, with little interaction among them.

The welfare-to-work program in Fresno, for example, subcontracts with the local PIC to manage employment and training services, and most GAIN participants enroll in the shorter-term programs used by JTPA. However, GAIN also sends about 500 welfare clients to the local community college and places caseworkers on the college campus to smooth any problems that may arise.²⁶ In Philadelphia, welfare clients enter one of the training programs under contract to JTPA; the institutions providing training for welfare clients are selected on the basis of their past performance on JTPA contracts. Similarly, the Scranton program uses the JTPA agency as the prime mechanism for referring clients to training, as required by Pennsylvania state policy. The Jacksonville program and Miami's Project Independence both refer their clients (especially those without work experience) to the JTPA program, primarily for OJT or customized training; very few welfare recipients enroll in community colleges.²⁷

What is most remarkable at this stage of welfare-to-work programs is how few individuals have found their way into any form of vocational education or job training. In part, this reflects the fact that implementation was slower than was initially projected; in some cases, the need for longer periods of remediation has prevented clients from entering vocational education and training;²⁸ and in others, the lack of resources for education and training is responsible.

Although this standard model defines the basic network of relationships among education and training institutions, we observed three variations on it. In the first, educational institutions are closely coordinated but have limited interaction with JTPA and welfare-to-work programs; in the second, community colleges dominate all other institutions; and in the third, the institutions that constitute the education and training system are essentially autonomous, with little interaction among them.

²⁶Some welfare-to-work programs use a method of individual referral rather than contracting for job training with other institutions; that is, they refer individuals to specific vocational skills training programs, depending on the interests and the abilities of the individual, using a variety of programs in CBOs and firms through JTPA and in community colleges, technical institutes, AVTSs, and even proprietary schools. Individually referred welfare recipients show up in a wider variety of institutions than do those in welfare-to-work programs that subcontract with a local JTPA program; however, the main point again is that welfare-to-work programs have used the existing institutions of the education and training system rather than developing new ones. A few of the welfare-to-work programs in our eight sample communities purchase individual training slots on a limited basis. Others, such as the program in Philadelphia, do not.

²⁷A recent directive has made enrollment in community colleges costless to local welfare programs, providing an incentive to send more Project Independence clients there. The effect of this change is still unclear, however.

²⁸Most welfare-to-work programs have found that they need to provide considerable remedial or basic education to their clients, and they usually do so by referring them to adult schools and community colleges, not by setting up their own programs.

In Fresno, Miami, and San Jose, we found a departure from the standard model. Cooperation among educational institutions and between JTPA and welfare-to-work programs is good, but relationships between the two subsystems are very limited.

The Parallel- Systems Model: Education Versus Training

In Fresno, all the local educational institutions meet regularly, in part to minimize competition among programs. There is a precise division of labor among the community colleges, the Vocational Training Center, the area vocational schools, and the high school programs, through articulation agreements, a 2+2+2 program that has been widely hailed as a model, and excellent personal relationships.²⁹ The local welfare-to-work program and JTPA, which manages employment and training services for the GAIN program, also have good working relationships. However, aside from a few JTPA and welfare clients who enroll in the community college's VTC³⁰ and a special program for about 550 welfare recipients on the community college campus, there are few other forms of collaboration between the education subsystem and the training subsystem. For reasons stemming from the political power of CBOs, the local JTPA program sends most of its clients to those institutions. About 75 percent of the JTPA clients receive short-term OJT rather than longer, classroom-based vocational skills training; this arrangement makes it easier to meet performance standards and also reduces the uncertainty of funding for CBOs. As a result, JTPA operates in its own world, dominated by CBOs and interest-group politics, while the educational community tends to shun the JTPA program, which it perceives as too riddled with politics.³¹

Miami also appears to have good working relationships among its different educational institutions. Partly because of the state-enforced division between noncredit programs in adult schools and credit programs in the community college, there is a clear division of labor, with articulation agreements linking programs in the high schools, adult schools, and

²⁹An example of the extent of cooperation among the major educational institutions is the way they handled the secondary system's interest in teaching a greater range of automotive classes. These classes had traditionally been taught by the community college, but the Fresno School District and Clovis, a large adjacent school district, felt that they could do a better job teaching some of them. All the relevant parties met and agreed to divide the classes so that, for example, the community college would continue to offer classes on brakes, but the two school districts would handle classes on front engines.

³⁰The extent of the cooperation between the community college and JTPA is limited in part because the cap on enrollments that generate state revenue and the lower state reimbursement for the noncredit students in the VTC provide no fiscal incentive to expand JTPA enrollments there.

³¹To some extent, the Fresno GAIN program may serve as a partial bridge between the parallel education and training subsystems. County GAIN administrators have taken the position that it is a community program, and they have made significant efforts to involve as many institutions as possible. Consequently, GAIN services of some sort are provided by twenty-five institutions and groups, including the major CBOs, the school district, the ROC/P, the community college, and even the four-year campus of the state university system, which does client assessment. Representatives from all these institutions now meet quarterly under GAIN auspices. Nevertheless, for the most part, the two subsystems continue as before, bifurcated and suspicious of each other.

community college. The JTPA program operates largely through CBOs; JTPA and Project Independence have good working relationships, partly because state policy dictates that welfare clients in need of training be sent to JTPA. However, the two subsystems have relatively few formal relationships. The JTPA program operates through CBOs because it has had little success working with either the community college or adult schools, which are not very effective in job placement. Community college administrators have explicitly decided to reduce their involvement with JTPA because they dislike having to provide placement services, because they feel that welfare clients are poorly motivated to work after training, and because working with JTPA provides neither fiscal incentives nor reputational advantages.³²

The configuration of institutions in these three communities reflects a long-standing division between educational institutions and job training programs such as JTPA, stemming from the different emphases of vocational education and job training.

In San Jose, the third community that conforms to this model, the educational institutions are again relatively well-connected: Local school districts support the ROC (even though fewer students are electing vocational programs), and there are several articulation agreements and 2+2 partnerships with the community college. There appears to be little conflict over adult education. Although adult schools and the community college both offer ESL, the demand is so great that competition for students is not a major issue. JTPA and GAIN are well-integrated—they are administered by the same county agency and share facilities. All the JTPA 8-percent funds (so named because they are equal to 8 percent of a state's allocation) to coordinate that program with educational institutions are used for GAIN clients, and JTPA performs initial appraisals for GAIN. But the educational system and the job training system are relatively independent of one another. The local JTPA program provides 90 percent of its services through CBOs because of perceptions that CBOs are effective and because of historical connections from CETA (the Comprehensive Employment and Training Act) and MDTA (the Manpower Development Training Act of 1962) days. JTPA is perceived by educators as both anti-education and politically motivated. The GAIN program does provide some basic education through adult schools and community colleges. In addition, some GAIN participants who volunteered for the program receive vocational training at community colleges and the area vocational school, but in late 1989, this group represented only 11 percent of the county's total GAIN caseload.

³²The state reimbursement system in Florida increases state revenues only if enrollments increase by more than 5 percent over a three-year period; thus small increases in enrollment do not generate additional revenues. Many community colleges have participated in JTPA largely for the revenues it generates. Miami-Dade Community College is the largest community college in the country, with a reputation of also being among the best, even as it provides a wide variety of educational programs for a culturally diverse population. Consequently, it does not need to provide training for a few hundred JTPA clients as a way of enhancing its image.

The configuration of institutions in these three communities reflects a long-standing division between educational institutions and job training programs such as JTPA, stemming from the different emphases of vocational education and job training. Vocational education stresses longer programs linked to related academic coursework and classroom instruction, to the exclusion of support services including placement. Job training, on the other hand, emphasizes shorter, more intensive, and more job-specific courses; preparation for entry-level rather than more advanced positions; and an array of related services including counseling, assessment, and job placement. It also typically focuses on a population that is less well-prepared for employment. In some cases, the differences in functions and strategies have led to outright animosity between the two subsystems, while in others, the two have operated independently as parallel systems. In some communities, the division has been healed by educational institutions more interested in working with JTPA and welfare clients, and by JTPA agencies interested in providing longer-term educational programs.

In Sioux City and Jacksonville, a different variation has developed in which the community college is dominant, providing almost every form of job-related education and training. In Sioux City, Western Iowa Technical Community College (WITCC) is also the administrator of the JTPA program. The JTPA office is well-integrated with the vocational programs of the community college, facilitating the development of community college programs for JTPA clients and the transfer of JTPA clients into the regular programs of the college.³³ The college does not provide all training for JTPA but—partly because relatively few CBOs operate in this region—it provides the vast majority, both in regular programs open to all students and in special courses tailored to JTPA clients. Because the developing welfare-to-work program (Promise/JOBS) will as a matter of state policy work through the local JTPA office, the community college will also administer this program.³⁴ The state has given community colleges a central role in economic development by allowing them to sell

The Dominant- Community- College Model

³³Although it is comparatively rare for community colleges to administer JTPA programs, there are a number of such arrangements, particularly in Iowa, Illinois, and Tennessee. This kind of administrative structure does not necessarily enhance coordination between JTPA and vocational education, however, because some community colleges establish a JTPA administrative office that is organizationally, physically, and culturally distinct from the rest of the college, with no greater integration with the regular vocational programs than an independent administrative entity would produce (see Grubb, Brown, Kaufman, and Lederer, 1989, 1990).

³⁴The community college is able to offer training for JTPA and welfare clients partly because of the presence of a Career Planning Service, concerned with placement, and a Career Learning Center for assessment and remediation—services that facilitate the incorporation of more placement-oriented job training for individuals with low academic achievement. In addition, WITCC used to be a technical institute and may thus be more committed to short-term programs and vocational offerings than a transfer-oriented community college might be.

training certificates and use the proceeds to fund customized training, and the college has also been active in that role. In addition, the college provides all the ABE in the area, using federal funding, an ESL grant from the Bureau of Refugee Services, and local tax revenue. The adult education programs refer eligible individuals to JTPA, and in turn, JTPA sends clients in need of GED preparation to the community college. There are no area vocational schools or technical institutes that might compete with the college for noncredit vocational programs, and there are relatively few proprietary schools. The college also operates an alternative high school jointly with the school district, incorporating a career component with JTPA funds, and it administers jointly with the school district a skills center that enrolls high school students in vocational courses. In short, the community college dominates every aspect of the work-related education and training system. This is a good example of an entrepreneurial and flexible community college, willing and able to move into novel areas of education such as customized training, shorter-term job training, and programs for nontraditional students, including JTPA clients and welfare recipients.

...a different variation has developed in which the community college is dominant, providing almost every form of job-related education and training.

The system in Jacksonville is similar: The Florida Community College at Jacksonville dominates the local system partly because of state policy and partly because of its own aggressiveness. In addition to providing the usual array of credit vocational programs, the community college provides noncredit vocational courses, as mandated by the state. It also has a Division of Adult Studies that provides most of the remedial education, ABE, ESL, and GED preparation in the area; both JTPA and the welfare-to-work program subcontract their basic education and remediation to the community college. The college is also the major provider of occupational skills training for JTPA, though some CBOs and proprietary schools are funded through a competitive RFP process.³⁵ With JTPA and the community college so tightly linked, it is not surprising that the welfare-to-work program, Project Independence, also uses the community college heavily. The college conducts the initial assessment of all clients, 90 percent of whom then attend the community college for ABE or GED preparation. Finally, the president of the college is a great believer in community colleges as economic development mechanisms.³⁶ The college, therefore, has an active Center for Economic Development

³⁵In Jacksonville, the JTPA program uses an unusual contracting mechanism in which service providers are reimbursed only when a client has been retained in training-related employment for 30 days. Providers must therefore assume an enormous risk, and CBOs have been especially reluctant to participate. The community college is willing to participate, even though it bears the risk and receives no state funding because of the lag in state average daily attendance (ADA) payments in Florida, apparently because of its aggressiveness in pursuing all local community programs. The college also takes a portfolio approach, taking risks on JTPA contracts that can be balanced by other moneymaking operations such as customized training.

³⁶The president came from Iowa and he brought in the "Iowa model" of the community colleges as the centerpiece of efforts to lure employment into the area.

which provides customized training at firms' expense, and it participates in the Sunshine State Skills Corporation (the state's program for funding customized training). Largely because of the lack of adult schools, AVTSs, or technical institutes in the Jacksonville area, the community college has become the principal provider of all forms of vocational education and job training.

The final configuration of institutional relationships we observed exists in Philadelphia. Each of the institutions within Philadelphia's education and training system is relatively independent of the others, pursuing its own agenda and making little effort to articulate or cooperate with other programs.

The Autonomous- Institutions Model

The school district has been active in developing new forms of vocational education, and it has initiated a major restructuring of the vocational education programs in its comprehensive high schools. This restructuring will involve the regionalization of vocational programs to make more efficient use of shop facilities and to allow high schools to serve as vocational magnets; innovative programs are also being established to integrate vocational and academic education. The Philadelphia business and philanthropic communities have provided substantial participation and financial support. However, the restructuring is occurring completely within the secondary school system, and no efforts have been made to coordinate the sequencing of courses with the community college. The area vocational schools and skills centers are almost entirely secondary institutions, enrolling fewer than 1,500 adult students. The community college does not participate in JTPA and has only limited involvement in the welfare-to-work program.

The Philadelphia PIC is a nonprofit corporation that is also the SDA administering the JTPA program. Its operating philosophy is that of a business, rather than that of a social service agency. It has some contracts with the Philadelphia school district, largely through the 8-percent JTPA coordination funds, but most of its services are provided through CBOs. Although Pennsylvania has a state-funded economic development program to provide customized job training through the State Department of Education, no Philadelphia institutions currently participate.

A striking aspect of the Philadelphia model is that all of the education and training institutions are individually well-connected with other elements of the community, but not with each other.³⁷ For example, the

³⁷There are a few notable exceptions to this modal behavior. For example, the West Philadelphia Improvement Corporation (WEPIC) is a collaborative of the Philadelphia school district, the University of Pennsylvania, the PIC, CBOs in West Philadelphia, and the

A striking aspect of the Philadelphia model is that all of the education and training institutions are individually well-connected with other elements of the community, but not with each other.

Philadelphia school system has a national reputation for the strength of its ties with the business community, and the PIC is viewed as an exemplar for its relationship with that same community, yet the two have little to do with each other. Similarly, because of its emphasis on transfer education, the Community College of Philadelphia has strong links with the many four-year colleges and universities in the area, but it has no relationship with the secondary system.

Despite the absence of cooperative arrangements, there appears to be very little hostility or competition among programs in Philadelphia. The dominant feeling is one of indifference; each institution defines its mission in a different way, and they all provide such different programs that there are few opportunities to collaborate and few instances in which competition might arise. Each institution is serious about its own mission and has taken substantial steps to implement a particular vision; this fact, rather than incompetence or ignorance about other programs, explains the lack of interrelationships. There is little sense of a system of work-related education and training in the community.

CONCLUSIONS

Other configurations of work-related education and training almost certainly exist.³⁸ However, our analysis suggests several conclusions that we believe are generalizable across the country. The most salient variation among communities is in the relationships among institutions and programs—that is, in the differences among the standard model and the three alternatives described above. However, important commonalities are also evident. The most important is that there is little duplication or competition among institutions. Probably for reasons of cost or the uncertainty associated with competition, even the most entrepreneurial institutions are careful not to intrude too far into the territory claimed by others.

In contrast to the variation in systems of institutional relationships, individual education and training institutions tend to be roughly similar in the types of training they provide and in the clients they serve. There is, of course, some variation within each institutional category, stemming largely from how narrowly or broadly a particular institution defines its mission, and from how many functions it decides to assume in addition to its traditional, core mission (e.g., whether a community college adds short-term, entry-level job training to its traditional emphasis on longer,

Building Trades Council. Each organization has a specific set of responsibilities related to education, job training, and neighborhood rehabilitation in that area.

³⁸In particular, we suspect that there are other divisions between educational programs and job training. In some communities, for example, the secondary and post-secondary vocational systems are intensely hostile to one another, so a cleavage may exist between secondary programs (including the adult schools and AVTSs run by school districts) and community colleges linked with JTPA and welfare-to-work programs.

more advanced vocational education). Even though they emphasize their local orientation and responsiveness to unique community needs, most community colleges, technical institutes, and AVTSs look roughly similar, as do most welfare-to-work and job training programs.

In the next section, we examine eight factors that help to explain the variation in the interactions of education and training institutions.

3. THE ROOTS OF INTERDEPENDENCE

The relationships that local institutions establish with each other and the ways in which they either link their activities or fail to do so create patterns of system interdependence. These patterns vary across communities, for several reasons. State and federal policies, including the mechanisms that fund particular institutions and programs, are significant in shaping what services are offered and how responsibilities are apportioned among institutions. Variation is also the result of factors beyond the reach of state and federal policy, embedded in local institutional histories and cultures, in local politics, and in local practices and personalities. The diverse patterns of interdependence across localities have their roots in complex interactions among these different factors.

...the analysis indicates the limits of directives and inducements in engendering local coordination. These policy instruments may help create the necessary conditions, but they are rarely sufficient to produce interaction if purely local factors such as institutional cultures and politics or the absence of local brokers work against it.

This section discusses eight factors that affect the nature of interactions among local education and training institutions in the communities we examined, listed in their approximate order of importance. Fiscal inducements are clearly the most significant, and local politics the least. However, it is difficult to rank these factors precisely because in some cases, differences in relative importance within a given category of explanatory factors are as great as the variation among categories. For example, among fiscal factors, federal inducements to encourage cooperation are relatively unimportant, while state funding mechanisms are critical. Similarly, federal and state policy directives to stimulate coordination among local education and training institutions are largely symbolic and procedural, while state decisions about the missions of different institutions are very important. Moreover, some factors are shaped by others. For example, local JTPA and welfare-to-work agencies function as brokers, largely because of the incentives that funding mechanisms provide for them to shift the costs of serving their clients to other publicly funded institutions. Similarly, institutional goals and emphases have been shaped in part by past fiscal inducements and policy directives, but they are also influenced by the visions of past and current leaders and by how other institutions in the community have defined their historical missions.

In sum, this discussion of factors shaping local patterns of institutional interaction is less than a rigorous explanatory model, but more than an ad hoc list. It argues that several factors are relatively more important than others in influencing the amount and type of interaction among local institutions, and that these factors are largely policy-driven. At the same time, the analysis indicates the limits of directives and inducements in engendering local coordination. These policy instruments may help create the necessary conditions, but they are rarely sufficient to produce interaction if purely local factors such as institutional cultures and politics or the absence of local brokers work against it.

The funding mechanisms that influence local systems most are those that provide—usually inadvertently—incentives or disincentives to collaborate. The most important of these is the common state practice of funding postsecondary programs on the basis of ADA or the number of full-time equivalent (FTE) students. Community colleges and technical institutes thus have financial incentives to accept JTPA and welfare clients as long as these clients generate state revenues.¹ The price competition among potential training providers in the JTPA system gives an advantage to community colleges and AVTSs, and the JTPA practice of subcontracting with community colleges to provide training is essentially driven by state postsecondary funding practices. This incentive for collaboration, however, can disappear under many different conditions. For example, the limits imposed on enrollments eligible for state support in California leave community colleges with no incentive to include any additional students. However, California provides state revenues for welfare clients in excess of the normal enrollment limits, which restores the incentive to accept welfare clients but not other JTPA clients. Similarly, when state revenues lag behind enrollment increases—as they do in Florida—community colleges and adult schools have no cost advantages over other providers. In such cases, purely fiscal incentives for cooperation vanish.

The nature of funding arrangements is particularly important in structuring local systems because nearly all education and training programs try to shift costs to others as a way of expanding the services they can provide their clients. This behavior is clearest in welfare-to-work programs, which have scarce funds and often include limitations on how long an individual can receive education and training. Shifting costs to other institutions—e.g., by sending welfare clients to adult schools for remediation and to AVTSs and community colleges for skills training—is often the only way these programs can provide meaningful services to reasonable numbers of welfare clients. This kind of cost shifting is also typical of JTPA, which has operated under pressure to minimize costs per placement. Administrators trying to provide longer and more intensive services often turn to community colleges and area vocational schools as the only way of bringing more resources into the system and providing longer programs without violating cost-per-placement standards.² The ability of high schools and community

FISCAL INDUCEMENTS AND FUNDING MECHANISMS

The nature of funding arrangements is particularly important in structuring local systems because nearly all education and training programs try to shift costs to others as a way of expanding the services they can provide their clients.

¹Substantial state revenues also help explain why community colleges need not avoid risky, performance-based contracts. For example, Fresno's VTC charges JTPA \$625 per person and receives \$1,400 per student in state subsidy. The VTC is reimbursed 20 percent of this \$625 at enrollment, 20 percent at the midpoint of training, 40 percent at completion, and 20 percent at placement; if the center fails to place an individual, it loses only \$125, which is only 2 to 6 percent of the total cost of each program.

²Some SDAs also take a portfolio approach, providing some longer-term training as long as they can balance it with short-term, inexpensive OJT to meet their average-cost-per-placement target.

colleges to shift their costs to other programs is limited. However, collaboration with JTPA programs supporting dropout prevention enables high schools to shift at least some of the higher costs of at-risk students. Finally, efforts to provide firm-based training, particularly the OJT funded by JTPA and by some of the state economic development programs, permit some firms to shift their training and startup costs onto the public sector.³ In general, then, the desire to shift costs to other institutions—an incentive created by the existence of too many clients with too many needs to be served with limited resources⁴—is a powerful factor in the creation of local interrelationships, although the ability to create these relationships depends on the nature of specific funding mechanisms.

A variant of cost-shifting has occurred in at least two of the communities we examined. In one, an area vocational school complained that the local JTPA administration sends the most job-ready individuals to CBOs, leaving the school those students with less labor market experience and lower skill levels. Similarly, the JTPA agency in Miami claimed that Project Independence trains the most job-ready individuals itself, sending those with the greatest barriers to employment to JTPA. Thus, the least job-ready individuals—those who are the most costly to train, least likely to find employment, and therefore the most risky to accept under any performance standards—are systematically allocated to certain institutions. Although it is unclear how common this form of cost-shifting (or risk-shifting) is, it can occur whenever a program has subcontracts with a variety of service providers. The incentives to shift are strongest when a program has limited resources or operates under performance standards, either formal or implied (e.g., political and fiscal pressures on welfare programs to move welfare recipients into employment).

Another strategy for encouraging collaboration among institutions providing education and training is simply to provide funding for such activities. For example, through JTPA, the 8-percent funds are set aside "to provide services for eligible participants through cooperative agreements" and "to facilitate coordination of education and training services." Many innovative collaborations between educational institutions and JTPA programs, including experimental approaches and programs for hard-to-serve populations, are funded with 8-percent funds. But

³However, many states require that firms match state funding, at least with in-kind contributions. Similarly, most community colleges require that firms support substantial portions of any customized program provided by the colleges (see Grubb and Stern, 1989, Sec. IV).

⁴The incentives for cost-shifting are especially powerful when funds are limited; institutions with open-ended funding—especially community colleges, AVTSs, and adult schools that receive unlimited ADA funds—are particularly susceptible to having costs shifted onto them.

the definition of coordination is vague, and the federal government does not monitor whether its intent is actually met in local communities (Bailis, 1987). As a result, states and localities have used these funds in ways that have nothing to do with coordination, including supporting economic development activities, funding welfare-to-work programs, hiding administrative expenditures, making it easier to meet performance standards, and simply providing a piece of the funding pie to educational institutions without fostering coordination (Gubb, Brown, Kaufman, and Lederer, 1990, Ch. II). The 8-percent funds were unimportant in fostering interrelationships among programs we observed in the eight sample communities. We conclude that even though funding may sometimes be a more powerful policy instrument than regulatory measures, funding without clear intent or with weak enforcement is unlikely to exert much influence.

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A different approach to stimulating interaction among education and training institutions is to require cooperation. Some states have undertaken initiatives to encourage cooperation and to influence interaction among local education and training programs, and some of these policies are quite powerful. In our eight communities, the clearest example of state influence is Florida's specification of a division between noncredit adult vocational education and certificate and Associate degree programs. This policy, which the state articulated clearly and then enforced, has been instrumental in reducing competition among providers in the Miami area. In Jacksonville, the state decision to assign adult vocational education to the community college was one of several factors in the emergence of the college as the dominant education and training institution in the area. Similarly, Pennsylvania's requirement that the state's Joint Jobs initiative, its demonstration welfare-to-work program, be implemented through local JTPA administrative agencies (SDAs) has forced a collaboration between the welfare agency and JTPA.

INTER-DEPENDENCE BY POLICY DIRECTIVE

Many states have established regional coordinating councils. Florida has Regional Coordinating Councils and Iowa has Area Planning Councils. In California, Regional Adult Vocational Advisory Councils (RAVACs) were instituted in the 1970s and then abandoned, although the members of the old RAVAC still meet in Fresno. Like federal efforts to require coordination at the state level, these policies attempt to enforce collaborative planning through exchanges of information rather than collaborative service delivery. Most local administrators report that the policies have been useful for suffusing the education and training system with information about other programs. But they have not themselves provided incentives for collaborative efforts, nor do they have the power to force interrelationships.

Some states have policies directing which local programs may receive state funds. For example, several state-funded economic development programs have emerged since the 1960s. Iowa has given community colleges the authority to sell bonds and use the proceeds for customized training, with the result that the community colleges now play a central role in economic development efforts. In California, on the other hand, the ETP incorporates a funding mechanism for customized training that deliberately supports alternatives to community colleges, especially direct funding to firms.⁵ Unlike Iowa, California chose not to strengthen one particular institution of the education and training system, and may even generate competition between community colleges providing customized training and other institutions funded by the ETP. Similarly, some states have specified which local institutions are to provide training in welfare-to-work programs. Florida and Iowa have both specified that local welfare offices subcontract with JTPA to provide short-term vocational skills training where appropriate. In theory, such decisions affect local systems. In practice, however, this directive probably reinforces what many local offices would do anyway because the fiscal incentive for welfare programs to subcontract with JTPA is so strong.

A final state policy, applicable only to educational institutions, is the requirement for state approval of new vocational programs. California, Florida, Pennsylvania, and Iowa all require some kind of state approval process. Typically, vocational programs must demonstrate adequate local demand for an occupation, and they may also be required to show that no other local institution is filling that particular need. In theory, these approval mechanisms forestall direct competition among institutions and also ensure some match between new offerings and local labor needs. In practice, however, local administrators uniformly report that these processes are ineffective because state enforcement is lax or because state officials lack the information to judge what really happens locally. State officials sometimes claim that approval processes work informally and indirectly: Local schools and colleges will not propose new programs that compete with other institutions if they know they have to justify their actions in a state forum. In general, however, because of the consistent downplaying of these state policies by local administrators, we suspect that the state regulatory policies operate only in extreme cases. States can prevent the most overt forms of competition, but they have neither the information nor the enforcement power to influence routine skirmishes among local educational institutions.

⁵Indeed, the community colleges often claim that the performance-based funding of the ETP is biased against them because they cannot (or will not) assume the risks associated with such funding, whereas firms can essentially guarantee placements at the end of the OJT period and therefore bear virtually no risk.

Federal legislation also typically includes directives requiring coordination among education and training programs. For example, the Perkins Act, which funds vocational education, and the JTPA legislation contain many different requirements related to coordination (Lewis, 1986), and the Family Support Act requires that welfare-to-work programs coordinate with JTPA, vocational education, and adult education programs. For the most part, federal legislation requires that programs consult with one another, share board members, and exchange information—that is, they require *collaborative planning* rather than *collaborative service delivery* (Bailis, 1987; Trutko, Bailis, and Barnow, 1989). There is little question, based on responses from local administrators, that such requirements have increased the amount of information available about other programs operating in a given system. However, information-sharing does not ensure that more substantial forms of cooperation will take place, especially those forms of collaborative service delivery that emerge in the standard model, or the articulation and division of labor that commonly reduce competition among educational institutions. In general, federal directives to coordinate seem the weakest of the mechanisms encouraging interdependence at the local level.⁶

There is little question that policy directives can influence local systems. However, like funding mechanisms, those policies that most self-consciously attempt to knit local institutions into coherent systems—through federal and state coordination councils and planning requirements—are probably the least effective. State decisions about the division of labor among local institutions, including decisions about which programs have priority to receive state funds, are much more influential.

The interrelationships among programs that define local systems have consistently emerged through local initiative.⁷ In every community we visited, the articulation agreements linking educational institutions developed because of local perceptions that students would be better served—and that schools and colleges might be better able to recruit students—if there were clear pathways among vocational programs at different levels. Similarly, in several communities a division of labor has developed from local consensus. In Fresno, for example, the school district focuses on adult education at proficiency levels below the thirteenth grade and vocational programs of less than one year, and the community college stays out of those markets. Similarly, in San Jose, the community college provides little adult education, leaving that to high school pro-

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INTER-DEPENDENCE THROUGH LOCAL INITIATIVE

⁶See also Grubb, Brown, Kaufman, and Lederer (1989, 1990).

⁷This finding is also consistent with the conclusion of Grubb, Brown, Kaufman, and Lederer (1989, 1990) that most forms of coordination between JTPA and vocational education arise from local initiatives rather than from federal or state coordination requirements.

grams. All the adult-education directors in the area meet once a month; the community college administration used to meet with them but no longer does so because problems of overlap have been solved.⁸ Since local SDAs have considerable authority to choose who provides services, the cooperation between JTPA and vocational education (where it exists) has come about through local decisions. Where welfare programs work with JTPA and vocational education, these forms of cooperation have uniformly emerged from a planning process in which all local providers have cooperated in planning welfare-to-work programs. State and federal planning requirements have sometimes been helpful in setting local initiatives in motion, in delimiting local choices, or in structuring the fiscal incentives (or disincentives) for interrelationships, but there is no mistaking the importance of local initiative in establishing these interdependencies.

Local administrators have a general dislike of competition because it places all education and training institutions in a bad light.

Several incentives in addition to the desire to shift costs to other programs drive local efforts. Local administrators have a general dislike of competition because it places all education and training institutions in a bad light. Squabbling among programs makes it appear that institutions are more interested in their own size and prominence than in delivering high-quality education and training. In extreme cases, state administrators may investigate reports of local competition, but even short of that, overt competition threatens to spark pressures for external regulation, including state and federal mandates for cooperation. One vocational administrator in Florida declared that competition between community colleges and adult schools over noncredit education caused the state to legislate a division of labor: "We brought it upon ourselves." Thus, there is a general belief that cooperation increases resources. As one administrator noted, "Cooperation brings more total dollars into the area." Finally, competition exacerbates uncertainty in enrollment projections, which a stable division of labor and articulation agreements can reduce. Because institutions within the education and training system are risk-averse,⁹ they tend to cooperate as a way to avoid uncertainty in enrollments.

Indeed, the incentives for direct competition with other providers of education and training are relatively weak. Institutions that attempt to "raid" other programs to increase their own enrollments must bear the costs of establishing new programs without any assurance that enroll-

⁸There remains some overlap between adult schools and the community college in the provision of ESL, but because of the enormous demand for English language training, this is not a major problem.

⁹Educational institutions are commonly perceived to be more risk-averse than those in JTPA. However, there is a great deal of risk-aversion within JTPA as well, and local programs consistently seek to shift risk to other institutions—as SDAs do when they use performance-based subcontracts, effectively shifting the risk of meeting performance standards to their service providers.

ments will materialize. Furthermore, any gains in enrollment may be temporary if other institutions retaliate. State-mandated limitations on new programs—either caps on state reimbursement as in California, lags in state reimbursement as in Florida, or approval processes for new programs requiring institutions to demonstrate that they are not duplicating existing programs—simply reinforce local incentives not to engage in overt competition. Indeed, highly entrepreneurial institutions, such as the community colleges in Sioux City and Jacksonville, operate by identifying new kinds of labor market needs to fill, rather than by engaging in direct competition with existing programs. Another result of the dislike of competition is that even in local systems where interrelationships are weak, interactions are characterized more by indifference than by competition and hostility, and institutions with different missions and strategies tend to interact more than those on the same terrain.

However, competition is generally unavoidable for two segments of the work-related education and training system: CBOs must generally compete for government grants (especially from JTPA) in order to survive, and private vocational schools must also compete for enrollments (and federal aid). The dislike of competition is partly a luxury among those institutions that enjoy the security of public funding, but whatever its source, it generally creates interdependencies among work-related education and training programs.

Another phenomenon contributing to the development of local systems is the rise of programs that essentially act as brokers in the education and training world. Local JTPA agencies are good examples. By and large, they operate not by providing services directly (except perhaps for the initial assessment of clients), but by contracting with other programs. Their planning processes bring together many local education and training programs, and even if these meetings do not generate any real cooperation, they contribute to the frequency of interactions among programs.

INTER- DEPENDENCE THROUGH LOCAL BROKERS

Similarly, in all the communities we visited, the process of establishing local welfare-to-work programs has been one in which welfare officials convened most of the community's education and training institutions. Many local administrators described these meetings as fruitful in clarifying what resources are available, which training specialties exist among providers, and what labor market opportunities are most appropriate for welfare recipients. Such meetings have not always led to collaboration, however; in some states, no local programs have been implemented, and some states have insufficient funds for extensive education and training. Still, the fact that a new program can operate by planning with existing providers and subcontracting with them for services contributes to the

...the fact that a new program can operate by planning with existing providers and subcontracting with them for services contributes to the sense that local systems of interdependent institutions exist, and that a rational division of labor is at least theoretically possible.

sense that local systems of interdependent institutions exist, and that a rational division of labor is at least theoretically possible.

State-funded economic development programs also operate as brokers, contracting with local institutions to provide various forms of training. However, these are less important in knitting together local systems because their emphasis tends to be statewide and they typically do not have a planning process that convenes local education and training institutions.

Programs that act as brokers usually develop joint programs between themselves and one additional institution—for example, between JTPA and a high school, between JTPA and a community college, or between a welfare-to-work program and an adult school. However, they also have the power to organize more complex combinations of education and training programs. In Miami, the SPA has found the local adult schools and community college deficient in recruitment and placement, while CBOs are more successful in recruitment within specific communities and in job placement, but less successful at classroom instruction. The solution, still in the planning stage when we visited, will be to fund collaborative efforts whereby CBOs will recruit clients and provide assessment, counseling, and placement services, while adult schools will provide appropriate remedial education and vocational skills training. In this approach, each institution specializes in a different service, and the brokering institution—in this case, JTPA—combines those services for specific clients. Something similar happens when welfare-to-work programs provide a series of sequential services, as they do in California. Welfare recipients in California may be sent first to an adult school for remedial education and then to an area vocational school or community college for vocational skills training.¹⁰ Whether these sequential programs are effective is difficult to assess at this point.¹¹ From our viewpoint, however, it is noteworthy that brokering agencies can create new forms of training from individual components of the current education and training system.

¹⁰In one model of cooperation between JTPA and vocational education (see Grubb, Brown, Kaufman, and Lederer, 1989, 1990), a local agency systematically allocates certain services to the institutions that are best able to provide them. There are few examples of this approach, but Massachusetts has been planning to implement such a model statewide through its local Regional Employment Boards.

¹¹While there is almost no real information about the effectiveness of programs that combine remediation and skills training, we suspect that dropout rates—or rates at which individuals fail to make it through the successive steps in a sequence of services—are high. For an initial evaluation of three models in which these services are provided concurrently, sequentially in one institution, and sequentially in different institutions, see Auspos et al. (1989).

Some private and public groups outside the education and training system, including chambers of commerce, business promotion groups, and city offices of economic development, sometimes act as third-party brokers. In Miami, the Beacon Council—a private business-funded group to promote employment in the Miami region—advertises the availability of JTPA training subsidies and training through adult schools to prospective employers. Local administrators, in turn, seem quite conscious of the role the Beacon Council can play and are responsive to its requests for information. In Fresno, the county economic development corporation plays the same kind of informational role. The Des Moines Chamber of Commerce convened a Labor Supply Task Force in 1988 and has since worked with vocational programs to make certain that the skills taught fit the needs of local employers. Similarly, in 1989, the Scranton Chamber of Commerce initiated a coordinating effort to identify the work skills needed in the area, to communicate that information to educational institutions, and to spearhead joint ventures among educational institutions and with businesses. Unlike JTPA and welfare-to-work programs, which have resources to allocate, these third-party brokers operate only as matchmakers and purveyors of information. Nevertheless, they treat local education and training programs as a system from which clients can choose appropriate components, and they increase the amount of interaction and information-sharing in that system.

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The scale of local systems, not surprisingly, also affects the way they operate. In relatively small communities—Fresno and Sioux City, for example—communication among education and training programs is much simpler than in larger cities, because there are far fewer institutions to include.¹² Within postsecondary education, for example, Miami has twenty-two adult schools and four community college branch campuses, in contrast to Sioux City with its single community college. Many small cities and rural areas have few education and training institutions, partly because they lack CBOs and proprietary vocational schools. Larger communities are also more complex because they comprise several distinct submarkets. In Miami, for example, the downtown campus of Miami-Dade Community College concentrates on programs for businesses located nearby, and most of its students are Hispanics and blacks from the central city; the north and south campuses, less dominated by business programs, have many more white and middle-class students. Finally, large cities are more likely to have politically powerful CBOs, which can contribute to competition within the local system of

SCALE AND PERSONAL RELATIONSHIPS

¹²In economic terms, the transaction costs of coordination are greater in a larger community with more institutions.

education and training as well as to divisions between job training and education.¹³

The scale of local systems, not surprisingly, also affects the way they operate.

Smaller communities do facilitate the kinds of personal relationships that local administrators feel are crucial to coordination. Indeed, administrators in small communities often interpret the operation of local systems wholly in terms of personalities and personal relationships, contrasting the lack of cooperation under a previous administrator who was hostile to cooperation with the different results under a new president, principal, or director. Certainly there is some truth to these views. However, a purely personal interpretation of how local systems function makes it impossible (and indeed unnecessary) to see any patterns in these systems, and it neglects structural and institutional factors—e.g., fiscal incentives and regulatory devices, jockeying for position within labor markets, and the variation in institutional purposes and cultures. We view personal relationships as necessary but not sufficient: Hostile personal relationships may thwart cooperation among programs, but even forceful individuals and strong personal relationships cannot enhance cooperation if basic institutional and fiscal incentives are missing.

We view personal relationships as necessary but not sufficient...even forceful individuals and strong personal relationships cannot enhance cooperation if basic institutional and fiscal incentives are missing.

For this reason, it is also easy to overstate the importance of scale as a cause of variations among local systems. What distinguishes the standard model from the model of autonomous institutions, for example, is not the size of communities or the closeness of personal relationships, but the interests of different programs in working with other programs. The lack of relationships among institutions in Philadelphia is due more to incompatibilities in institutional goals and culture than to the size of the city. Conversely, the model in which a community college dominates all other institutions is a function of the presence or absence of other local institutions, as well as the interest of a local college in taking on a variety of purposes, not a function of scale.¹⁴ Certainly, smaller communities have an easier time developing tightly interwoven relationships among programs than larger cities, but since size is only one of many factors influencing local education and training systems, its influence is neither simple nor direct.

¹³In the search for exemplary cases of coordination between vocational education and JTPA, Grubb, Brown, Kaufman, and Lederer (1989, 1990) were repeatedly directed to programs in rural communities. Typically, local administrators attributed this coordination to the close personal relationships possible in small towns. But a more convincing explanation is that in many rural areas, community colleges (or AVTSs) are the only providers of education and training, forcing cooperation between vocational programs and JTPA. In cities where JTPA resources are allocated to politically powerful CBOs, resources to support coordination between vocational programs and JTPA are limited.

¹⁴For this particular model, size may make a difference, however. It is difficult to imagine a single community college being as dominant in a very large community as the community colleges are in Sioux City and Jacksonville, because colleges above a certain size become unwieldy, if not ungovernable. Of course, a college could have branch campuses, as Miami-Dade Community College does; then *intra*institutional rather than *inter*institutional coordination becomes necessary.

Much of the variation among local systems is determined by the history and culture of local institutions. In particular, decisions about institutional goals and emphases of institutions are crucial. The emphasis in Philadelphia on a transfer-oriented community college—as compared with Sioux City's and Jacksonville's emphasis on substantial economic development activities—has caused the college to be relatively isolated from other programs. The fragmentation of secondary vocational education programs in Philadelphia is also, to some extent, a result of diverse institutional goals and constraints. For example, the academy program was designed as an intervention to reduce the number of high school dropouts; vocational education programs are still offered in comprehensive high schools because union contracts and political imperatives prevent the closing of such programs; and skills centers address the reality that comprehensive high schools have neither the appropriately trained teachers nor the equipment to provide state-of-the-art training in all areas. The variation in the ethos of local JTPA programs—the distinction among bureaucratic, political, corporate, and client-centered approaches—has significantly affected the predispositions of JTPA administrators to cooperate with education and welfare programs. Similarly, the variation in the attitudes of local welfare agencies—from those that place highest priority on quickly moving welfare recipients into employment to those that emphasize the need to provide substantial skills to facilitate clients' advancement over the longer run—affects the ways those agencies work with short-term versus longer-term training programs.

To some extent, local priorities and cultures can be molded by either state or federal policy. For example, JTPA legislative revisions now before Congress would focus more resources and emphasis on long-run employment outcomes and would also operate to prevent creaming. Some states, such as California, have community college systems that, as a matter of policy, are transfer-oriented; others, such as North Carolina, with its limit on the proportions of transfer students, intend community colleges to be predominantly vocational. Some states determine the character of their economic development efforts by deciding whether to use only community colleges or a broader range of local providers, and by specifying limits on the kinds of employers that can be subsidized (e.g., Iowa prohibits support for retail establishments, professional services, and health providers). Similarly, states shape the character of their welfare-to-work programs—sometimes implicitly—when they decide whether or not to specify particular services, provide funding for certain forms of education and training, or establish limits on the length of time an individual can be in a program.

However, federal and state control over local emphases and purposes is limited. As proponents of community colleges stress repeatedly, a com-

LOCAL INSTITUTIONAL HISTORY AND CULTURE

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munity college system without the freedom to adapt its programs to local needs would not really serve its own community. Within JTPA, the establishment of local PICs dominated by local business representatives reflected congressional interest in having local programs conform to local needs. Inevitably, within a federal system there is always tension between local control and state or federal efforts to impose uniform purposes on local institutions. But in the case of work-related education and training programs, the argument for local control—and therefore local definition of emphasis and purpose—is especially strong, because the labor markets and community needs to be served are so obviously local.

Some configurations of local programs are the result of historical events and accidents. In Scranton, the presence of a well-regarded private technical institute has been one factor precluding the establishment of a local community college; but the fact that this institution is private has also complicated coordination between it and other training programs. The location of the Fresno Vocational Training Center within the community college, as well as its ability to generate state revenues for JTPA and welfare recipients, is a legacy of the 1970s, when skills centers were established under CETA. For idiosyncratic reasons, the Fresno center was absorbed by the community college, while most skills centers elsewhere folded. Similarly, the tendency for JTPA to work closely with CBOs is partly a legacy from CETA days (Cook et al., 1985). Some of these historical configurations¹⁵ can be influenced by policy. They can, for example, be either encouraged by funding and regulatory mechanisms or discouraged by eliminating public funding or by establishing competitors. In general, however, established institutions tend to generate political support, and the natural tendency to avoid conflict and competition makes it difficult to close them. Typically, institutions have accumulated over time rather than closing and being replaced by different institutions.¹⁶ As a result, established patterns and historical accidents can have substantial effects on local systems for very long periods of time.

¹⁵In this report, we have taken an essentially static view of local systems of work-related education and training, devoting little attention to the historical process by which they developed. As a result, we note historical accidents and legacies as if these are exogenous to our analysis. A more historical approach would probably give us a much better understanding of the process—by turns political, economic, and Darwinian—through which institutions come into being and survive or collapse. However, such an approach would be difficult because many of the institutions we have examined have sparse historical records, little institutional memory, and relatively few long-term employees who could trace their evolution.

¹⁶A good example of the tendency of programs to persist, even under substantial changes, is the transition from CETA to JTPA during the Reagan administration. Although the JTPA legislation provided ample opportunity for states to restructure local JTPA administrations, most remained the same, and many current service providers—especially the more prominent CBOs—were also providers under CETA. On the transition to JTPA, see Cook et al. (1985).

Even where local programs have minimal collaboration, their existence in the same labor market creates certain kinds of interdependence. In almost all communities, the non-degree-granting education and training institutions we examined prepare students for local labor markets, rather than for regional or national markets. Therefore, their primary competitors are other local programs, and each concentrates on meeting local skill needs. The desire to avoid competition means that programs often try to find their own particular niches or specialties. Sometimes a niche is defined by levels in the labor market: Community colleges tend to dominate the training for more advanced jobs; AVTSs and noncredit vocational programs tend to prepare their students for entry-level jobs paying about \$5 to \$8 an hour; and programs providing training for welfare recipients are often aimed toward jobs paying just above minimum wage, from about \$4 to \$6 an hour. In other cases, niches are defined in terms of target populations: CBOs, for example, may specialize in programs for the handicapped, displaced homemakers, or specific racial and ethnic groups. Occasionally a spatial division of labor will develop: In Fresno, one CBO provides all JTPA services in rural areas, while others provide services within different areas of the city itself. One might reasonably expect some specialization by sector or occupation, but with the exception of private vocational schools, which tend to specialize in particular occupations, we saw no tendency for local programs to concentrate on particular occupations or specific sectors.

A few other differences among education and training systems can be attributed to variations in local labor markets. In the one declining community in our sample that has substantial outmigration—Sioux City—the dominant provider of training (the community college) focuses on preparing individuals for a regional market because most young people will have to leave the community to find work. At the other end of the spectrum, in communities with low unemployment rates such as San Jose, the individuals who cannot find work—and who therefore show up in JTPA or welfare-to-work programs—are the ones who have the most serious skill deficiencies and require more intensive services. In depressed communities, those eligible for JTPA and welfare are, on the whole, much more job-ready and need fewer services. With proportionately more applicants in the labor pool, these programs can more easily cream than programs in booming areas.¹⁷ In theory, this mechanism might force greater cooperation among education and training providers in communities with low unemployment rates, to coordinate the range of services the unemployed require. However, the opposite is more likely to occur. In communities with high unemployment rates, the demands on the education and training system are so great and place such a strain

THE SEARCH FOR LABOR MARKET NICHEs

Even where local programs have minimal collaboration, their existence in the same labor market creates certain kinds of interdependence.

¹⁷For corroboration of the tendency to cream in high-unemployment areas, see U.S. GAO (1989).

on available resources that local providers band together to try to serve more individuals through cooperation. Sioux City and Scranton are the best examples in our sample of communities: With the decline of a farm-based economy in the former and of manufacturing in the latter, most providers mentioned the need to coordinate efforts to provide enough training for displaced workers.

In communities with high unemployment rates, the demands on the education and training system are so great and place such a strain on available resources that local providers band together to try to serve more individuals through cooperation.

However, in general, the nature of local labor markets has surprisingly little effect on differences among education and training systems. Although the communities in our sample had very different kinds of labor markets, this factor was not significant in explaining variation in either the nature of individual institutions or their interactions. At the level of education and training we examined, the same occupations and training programs exist in virtually every labor market: secretarial and clerical workers; those in business-related occupations, such as accountants; health technicians and nurses; construction workers; electronics technicians; computer programmers and operators; and a variety of relatively low-skilled workers in occupations requiring only short-term training. In addition, the tendency for education and training institutions to adapt their offerings to local labor market needs—e.g., more agriculture-related programs in Sioux City and Fresno and more training related to garment manufacturing in Miami—does not affect the ways these institutions interact with one another. The fact that all programs in a community operate in the same labor market means that their offerings tend to be relatively similar, facilitating collaboration as long as the other conditions necessary for cooperation are present.

LOCAL POLITICS

A final influence on systems of work-related education and training is the nature of local politics. Surprisingly, however, we found relatively little political influence, with one possible exception. Within JTPA programs, the approach we have labeled political is one in which local administrators allocate funds to politically influential groups, particularly CBOs,¹⁸ with greater consideration for their political standing than for the quality of their services. However, of our eight sample communities, only Fresno showed a tendency for local politics to dominate the allocation of funds; this in turn contributed to the cleavage between JTPA and educational institutions in the community. In this community, well-established links between CBOs and local politicians influence the distribution of JTPA contracts. Furthermore, the ethos that all groups should be given a piece of the funding pie—with the division based more on political boundaries than on expertise and comparative advantage in deliv-

¹⁸CBOs are not the only institutions with disproportionate political influence. Although we did not observe this situation in our eight sample communities, public institutions such as community colleges might also wield sufficient influence to bias the distribution of JTPA and other education and training funds.

ering client services—is pervasive. The widespread perception in Fresno that political motivations infuse JTPA operations has limited the interest of public institutions in participating, and in turn, their criticisms have made the CBOs reluctant to collaborate with them.

In other communities, a variety of factors have prevented local programs from being overwhelmed by interest-group politics. The political fragmentation of the Miami area made it impossible for CBOs to have much power there, and a competent administrative unit has managed to develop a good deal of autonomy in its decisions. In Sioux City and Jacksonville, the absence of CBOs and the preeminence of the community colleges have precluded the dominance of purely political decisions.

The lack of evidence we found of interest-group politics influencing local configurations of education and training could indicate that our sample was inadvertently skewed. After all, some community colleges as well as JTPA programs are widely known to be unduly political, and it is conceivable that some communities have local systems—both educational institutions and job training programs—that are entirely dominated by local politics. However, several mechanisms in the education and training system work against this possibility. First, most educational institutions are enrollment-driven, largely because of revenue structures as well as the desire for visibility and status within the community. As a result, there are constant pressures to close programs that do not generate sufficient enrollments—reinforced, in the case of Florida, by the need to show that 70 percent of those who complete programs are placed in related jobs. Consequently, even politically influential programs with low enrollments cannot long survive.¹⁹ Second, many community colleges and area vocational schools have advisory committees and participate in local councils that transmit advice from local constituencies and interest groups. Although these mechanisms may convey certain pressures—to offer a vocational program for a particular sector or occupation, for example—they also mean that the educational institutions operate in a relatively open fashion with decisions subject to public scrutiny and comment. Third, within JTPA, performance standards have imposed a certain discipline on the choice of service providers: Several local administrators declared that the need to meet performance standards had enabled them to terminate contracts with low-performing, though politically powerful, providers.

Finally, we have been impressed with how many providers of education and training are deeply committed to their constituencies and therefore

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...we have been impressed with how many providers of education and training are deeply committed to their constituencies and therefore work to fend off political claims that would not benefit them.

¹⁹In institutions with effective enrollment limits, the pressures to close underenrolled programs—which cause institutions to enroll fewer students than their limits—are even more intense.

...our principal conclusion is that the complexity of and variation among local education and training systems stem not so much from the absolute numbers of different institutions in a given community, or from differences in their individual missions, but from the multiplicity of factors that influence the ways these institutions interact with one another.

work to fend off political claims that would not benefit them. Many faculty members and administrators at community colleges and technical institutes are genuinely committed to helping their students, whom they see as being denied access to the rest of higher education, and the JTPA and welfare-to-work programs that display a client-centered ethic similarly work hard to improve future employment opportunities for those at the fringes of the labor market. A number of forces within the education and training system, then, counter purely political interests and help to explain why local politics are a minor factor in the variation among systems of work-related education and training.

Given the multiplicity and complexity of the institutions providing education and training, it is not surprising that many different factors influence local configurations. These factors can interact in many different ways, so their impact is rarely simple or direct. Even institutions with divergent missions may work together—when there are fiscal incentives to do so, for example—and good personal relationships may avail nothing in the absence of institutional support. With a larger sample of communities and additional study, we might be able to determine which factors are the most important, which are likely to operate in tandem with others, and which can most easily be weakened in their impact. But for the moment, our principal conclusion is that the complexity of and variation among local education and training systems stem not so much from the absolute numbers of different institutions in a given community, or from differences in their individual missions, but from the multiplicity of factors that influence the ways these institutions interact with one another.

4. THE CONSEQUENCES OF VARIATION IN LOCAL SYSTEMS: DILEMMAS OF EFFECTIVENESS

A major reason for examining local education and training systems was to identify models that other communities might consider when they modify or expand their own systems. Understanding the key similarities and differences among systems and the factors most influential in shaping them is a first step beyond the current program- or institution-specific view of education and training. But such information is of limited use if we cannot also identify which types of local systems are most effective in preparing individuals for productive employment—that is, which of the models described in Section 3 is more effective in a given situation.

We cannot begin to make such assessments at this point, since this exploratory study was designed only to map the major dimensions along which a limited number of local systems vary. Extensive data will be needed to assess the effectiveness of the individual institutions and programs that constitute local systems. However, even if we had the resources to collect such data, we could not answer the effectiveness question at the level of entire local systems. The overwhelming majority of policymakers and researchers consider performance in education and job training on a program-by-program and institution-by-institution basis. Some states, including Florida, have considered the relative merits of one institution over another in providing certain kinds of training, but very few political entities have examined the effectiveness of entire systems or asked questions about the match between certain configurations of education and training institutions and local community demographics, labor markets, and training needs.

Understanding the key similarities and differences among systems and the factors most influential in shaping them is a first step beyond the current program- or institution-specific view of education and training.

To undertake such a task, one would first have to assume that the whole is greater than the sum of its parts—that the ability to provide high-quality education and training depends not only on the effectiveness of individual institutions, but also on how well these institutions mesh together. The evaluation would also require indicator data that are comparable across institutions and programs and analytic techniques that generate valid measures of systemwide performance. The study of work-related education and training is nowhere near that point, and the history of indicator efforts in other social policy areas, such as K-12 education, demonstrates the length and difficulty of developing indicators.¹

In this section, we present a very preliminary discussion of some of the questions that an assessment of education and training systems raises and suggest some kinds of indicators that will need to be designed to an-

¹For a general discussion of social indicators and their design, see de Neufville (1975) and MacRae (1985). On the development of indicators measuring the performance of the K-12 educational system, see Shavelson et al. (1989).

swer basic questions of system performance. Our discussion should be viewed as an initial step in what will be a complex and arduous effort.

**UNANSWERED
QUESTIONS
ABOUT
COORDINATION
AND
EFFECTIVENESS**

State and federal policies usually operate on the presumption that coordination is desirable, and they impose coordination requirements in the interest of greater effectiveness. But this presumption needs to be closely examined. One strength of the standard model, with its highly interdependent institutions, is that cooperation among programs opens up possibilities that would otherwise not exist. If JTPA can subcontract with a variety of educational institutions, then JTPA clients (and in turn many welfare clients) can gain access to longer-term community college programs as well as to shorter-term programs and firm-based OJT. If community colleges participate in customized training and other economic development activities, they gain access to information about labor market trends, establish additional contacts with employers, and publicize information about their other programs to another set of potential students. The interconnections of the standard model appear to increase options and information for students, employers, and programs alike. Similarly, the model in which community colleges are dominant means that access to the entire education and training system is simple for both students and employers.

On the other hand, in a local system of autonomous institutions, certain training options are foreclosed, especially to JTPA and welfare clients. Entry into the system may also be difficult because institutions do not routinely refer individuals to other institutions, and progression through the system—facilitated in the standard model by the articulation mechanisms among educational programs—is left entirely to the student. Nevertheless, it is possible that when institutions are highly effective at the kinds of education or training they do best, students and employers can make their own interconnections among programs and are in the long run better served than if program resources have to be devoted to establishing formal coordination mechanisms.² It is also possible that the ex-

²This is a simple version of a more complex free-market model which implies that variations among local systems make no difference in their effectiveness. As long as individuals needing training and employers recruiting workers are well-informed about the education and training options they face, prospective students will attend the programs with the highest rates of return and employers will hire from programs that provide the preparation best suited to their needs. By a process of competition, weak programs will be eliminated and the programs that remain—which can vary among communities in their organizational structure and institutional sponsorship—will be equally effective in providing work-related training. However, this model, brought to our attention by Robert Meyer, assumes perfect information among students and employers, a condition that clearly does not hold. It also assumes that weak institutions will go out of business, which is rarely the case with public institutions. Furthermore, it assumes that there is free choice within the system of work-related education and training, which is clearly not the case with different eligibility standards and variation in geographic access to training. Finally, it assumes that there are no externalities in training—which is highly unlikely (Stern and Grubb, 1988).

panded options of the standard model are not especially valuable. JTPA clients, for example, may be best served by any program that gets them initial entry into the labor market where they gain work experience and further skills on the job; longer programs in area vocational schools and technical institutes or remedial programs available in adult schools may not add much. In addition, at this particular level of the labor market, there may be several equivalent ways of preparing for occupations. If a particular form of training is missing, employers could provide it on the job or adjust their production so that certain skills are unnecessary, or individuals may be able to pick up skills by working alongside experienced workers or by other apprenticeship-like methods. If these assumptions are correct, the variation among local systems we have described would be unrelated to effectiveness.

Consequently, while there is a strong presumption that better-articulated systems are more effective, there is insufficient evidence to assess any claims about the relative effectiveness of local systems. In the first place, the major dimensions of effectiveness need to be defined. But even with that task accomplished, the most basic information about local programs—enrollment composition, for example—is still extremely difficult to collect in a consistent way across institutions or communities.³ Information about more complex issues—the short- and long-term employment effects of different programs, to take an obvious example—is not only lacking, it cannot be obtained from existing information systems for a variety of programs. To complicate the issue still further, standards of effectiveness vary across communities with different labor markets and with different numbers and types of individuals in need of education and training.

Experience in designing performance indicators for other social policy areas suggests that in addition to meeting technical reliability and validity criteria, indicators must be feasible to collect and, above all, useful to a variety of audiences. Some audiences, for example, are primarily concerned about the efficiency of system outcomes—does the system produce the best possible outcomes, given the amount of resources expended? Others are concerned about client access to services or the quality and comprehensiveness of those services. Still others, such as elected officials, may need only very general information about client access or program outcomes, while institutional administrators need more varied and detailed data. Because of these different user needs, multiple

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³One example of the difficulty of collecting comparable data has already been cited. A key attribute of enrollment composition is the number of individuals in short-term vs. long-term programs. Making that distinction, however, is particularly difficult in disaggregating community college enrollments because many students enrolled in certificate or degree programs use them as open-exit options and leave once they feel they have obtained sufficient training. Since colleges have no systematic way to gauge students' future behavior, they cannot reliably disaggregate their enrollments on this dimension.

indicators are needed to assess the effectiveness of individual institutions and programs and especially of entire local education and training systems.

In what follows, we briefly outline six categories of indicators that will have to be developed before questions about the effectiveness of different local configurations of education and training institutions can be answered.

AN INITIAL SET OF EFFECTIVENESS INDICATORS

Accessibility to Individuals

The accessibility and responsiveness of local systems to potential clients constitute an important dimension of effectiveness. Specific measures of accessibility include:

- The proportion of those needing education and training who are served by particular kinds of systems.
- The characteristics of those served (including race, gender, economic status, experience, and educational background), compared with the characteristics of those who are eligible or in need.
- The ability of individuals in the system to move among programs, i.e., the availability of a continuum of education and training.
- The ability of individuals to attain the goals they set for themselves in particular kinds of systems.
- The variety of available training opportunities in the local system.

The accessibility and responsiveness of local systems to potential clients constitute an important dimension of effectiveness.

Currently, it is difficult to obtain even simple information about enrollments. Inconsistencies in reporting by institutions and the difficulties of interpreting enrollment data for programs that differ in duration and intensity are the most obvious problems. The problems of distinguishing vocational students from academic or transfer students in high schools and community colleges have never been resolved. Consequently, the magnitude of work-related enrollments in the largest institutions of the education and training system is unclear. The data necessary for comparative purposes—the numbers of individuals in need of education or training, eligible for JTPA, or in welfare programs and both interested in and able to participate in training programs, disaggregated by demo-

graphic characteristics—are now unavailable in any form, even if the concept of those “in need of training” could be further defined.

The question of how well different local systems meet education and training demands is very important. In most of the eight communities in our sample, program administrators acknowledged that local training needs are not being completely met, especially for welfare recipients and other individuals eligible for JTPA. However, no one was able to estimate precisely the extent of unmet demand, and the lack of appropriate data is an obvious reason.

Longitudinal data, necessary for following individuals among institutions, are also inadequate. Although JTPA and welfare programs have systems for tracking clients up to several months after training, most community colleges and area vocational schools do not have reliable methods for longitudinal follow-up of students. Consequently, data systems that follow students from system to system—e.g., from JTPA into community colleges, or from high schools into postsecondary vocational programs—are virtually nonexistent.⁴

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An analogous dimension of performance is the accessibility of education and training institutions to employers seeking trained workers. Measures of accessibility to employers would distinguish systems in which employers are able to find out easily which institutions can provide workers from systems in which employers do not have ready access to education and training programs or are confused about where to turn. Because direct measures of accessibility are not available, anecdotes about the difficulties employers face⁵ or institutional sources such as customized training units within community colleges provide the only information available.

**Accessibility to
Employers**

Economic development agencies and chambers of commerce in our sample typically complained about employers' problems in finding out what kinds of services are available from different institutions and what kinds of workers they train. Good information was viewed by people in these agencies as a way for firms to avoid having to “shop around” and to be more efficient in their training and hiring efforts.

⁴The issue of transfer rates between community colleges and four-year colleges has been the focus of sustained attention; but even here, longitudinal data are sparse. Two efforts to develop better transfer data are reported in Cohen (1990) and BW Associates (1989); for transfer rates using longitudinal data, see Grubb, Brown, Kaufman, and Lederer (1990).

⁵For example, the dual training system in Florida, where in some communities non-credit vocational education is provided by adult schools and credit programs are offered by community colleges, is apparently confusing to employers.

**Adaptability to
Labor Market
Changes**

Well-functioning local systems should be able to adapt their offerings to changes in demand for different occupations and to match enrollment changes in specific programs with those changes. However, the analysis necessary to make such matches would require not only accurate and comparable enrollment figures, but also annual information on employment by occupation for specific communities—and such data do not exist. It is thus necessary to rely on information generated through different procedural mechanisms—occupational advisory groups, for example—and the opinions of employers. Although such qualitative information is useful, it is not a substitute for more precise data in judging the responsiveness of local systems.

**Employment
Effects**

The most obvious result of vocational education and job training programs is employment. One measure of program effectiveness is employment in a job related to the area of training—since the relatively circumscribed preparation available in vocational education and training programs is presumably worthless in occupations unrelated to the field of specialization. Florida, for example, requires that vocational programs place 70 percent of their completers in related employment.

Since stable occupations with continuous employment provide higher annual earnings than unstable occupations at the same hourly wage rate, the difference between wage rates and annual earnings is important.

Other dimensions of employment include wage rates, annual earnings, and amounts of employment over extended periods. Since stable occupations with continuous employment provide higher annual earnings than unstable occupations at the same hourly wage rate, the difference between wage rates and annual earnings is important. Also, employment, wages, and earnings can be measured immediately after leaving an education or training program, within 30 or 90 days, after one year, or after a longer period of time. The differences are crucial, since some programs appear to place individuals in high-turnover positions with dismal long-run potential, while others try to prepare students for entry-level positions in occupations with substantial opportunities for promotion and earnings growth. There are, of course, noneconomic benefits that may be improved by education and training—such as variety, challenge, and overall job satisfaction—but they are even less often measured than are economic effects.

Despite the centrality of employment effects, even the most basic information about these consequences is lacking in local education and training systems. JTPA programs must collect information about placement rates and initial earnings, but they rarely collect this information over periods longer than 30 days (although a few SDAs are beginning to collect information after 90 days). Because federal regulations do not require them to do so, SDAs do not collect information about placement rates and earnings by the specific types of services individuals receive. Therefore, it is impossible to address the question of whether those who have completed longer classroom training programs, classroom training

provided by community colleges rather than CBOs, OJT, or remedial education followed by vocational skill training have higher earnings or employment rates than others. Although a great deal of information about the employment effects of CETA was generated at the national level,⁶ no similar results will be available for JTPA until 1992, when the National JTPA Study is completed (Gueron, Orr, and Bloom, 1988). Florida has begun to require the use of data systems such as the unemployment insurance, Department of Defense, and state postsecondary student files to track community college program completers; and California has experimented with a follow-up system to ascertain the employment and earnings of those who complete community college vocational programs. But even in states where such efforts are under way, the results are incomplete and short-run. In addition, nationally representative research on the effects of community colleges, technical institutes, and AVTSs is relatively sparse.⁷

Probably the best systematic information is collected by welfare-to-work programs, which require detailed tracking of AFDC clients. But even if this information were readily available, the problems of interpreting the results are formidable, given the enormous variation in available services and the powerful selection processes operating.⁸ Indeed, there are powerful selection and self-selection effects in all these programs; individuals with different abilities, motivation, and past labor market experience end up in different programs, both because of the procedures programs establish to recruit individuals and the decisions individuals make about which programs to attend. Disentangling the effects of selection from the employment benefits of programs is extremely difficult, even impossible in some cases. As a result, the most basic employment outcomes of education and training programs at the local level are unknown.

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⁶See especially Barnow (1986) and Taggart (1981) for reviews of these results.

⁷Studies of the rate of return to schooling are numerous. For reviews, see Rosen (1976), Hill (1981), and Leslie and Brinkman (1988). However, almost all of these studies look at the differences among high school graduates (and those with lower levels of education), individuals with "some college," B.A. completers, and sometimes individuals with graduate degrees, without any detail about types of degrees or the attainment of the "some college" group. For a review of institutional studies, many of them limited and poorly controlled, see Pincus (1980). Heinemann and Sussna (1977) and Blair, Finn, and Stevenson (1981) have found positive effects for community college programs, but both studies use single-institution samples of limited generalizability. Belanger and Lavallee (1980) find substantial internal rates of return to community college degrees in computer science, nursing, nutrition, and social work, but these returns are not standardized for experience or any other explanatory variables, and they describe within-occupation returns. Similarly, the positive returns found by McMahon and Wagner (1982) for Associate degrees for electrical technicians and accountants are uncontrolled and within-occupation. For early results of examinations of the National Longitudinal Study of the Class of 1972 (NLS 72) data on the effects of community college enrollment on earnings and wages, see Breneman and Nelson (1981). However, their studies examined students in 1979, much too early to consider the effects of schooling, and they used self-reported rather than transcript-reported education. For recent work with NLS 72, see Grubb (1989a, 1991).

⁸There is also substantial evidence about the experimental programs established in the 1980s (see Gueron, 1987).

Program Quality

A different dimension of quality that applies to entire systems is whether a continuum of training exists—whether individuals can begin in short, entry-level training programs and then enter more advanced programs providing access to higher-skilled, higher-paid positions.

Other program effects include the specific competencies participants acquire. These may also subsume another dimension of quality: whether equipment, skills, and production methods used in vocational skill training are up to date. Many of the vocational programs have shifted to competency-based instruction, and most JTPA programs use competency goals, particularly for their youth programs. Such targets are useful for assessing individual programs, but for purposes of comparing across programs or comparing the effects of education and training systems in different communities, competencies are of limited value because they vary so much from program to program. If competencies were consistently used in education and training programs, it would be possible to compare them—for example, one could compare the expected competencies of electronics technicians in different programs and in different communities. However, until such uniformity exists, competencies cannot be used to judge the relative effectiveness of local systems.

A different dimension of quality that applies to entire systems is whether a continuum of training exists—whether individuals can begin in short, entry-level training programs and then enter more advanced programs providing access to higher-skilled, higher-paid positions. Such a continuum of training is one of the few plausible ways of addressing the problem of moving unskilled, inexperienced adults (including many AFDC and JTPA clients) who are unable or unwilling to devote many years to full-time schooling into the labor market and through a progression of increasingly skilled positions. To some extent, the information we collected in our case studies indicates whether such continua exist: They are more complete in Fresno and Miami, for example, with good articulation among vocational education programs at different levels, and in Sioux City and Jacksonville, where many programs are provided by the community college, than they are in Philadelphia, with its autonomous institutions. But whether individuals actually take advantage of these training ladders is a question that requires longitudinal data about individuals and programs, rather than just institutional information about articulation agreements. Such longitudinal information is not currently available.

Cost

Another dimension of local systems of work-related education and training is cost. Different institutions have programs of varying length, and therefore varying cost. Most programs can provide simple figures on cost per enrollment. However, because they typically lump together disparate types of programs—long-term classroom training and short-term OJT programs within JTPA, for example, or students in short-term adult education with those in longer-term Associate degree programs in community colleges—they are difficult to interpret. In addition, administrative costs vary among communities. Duplication (where it exists) increases effective costs, and coordination costs—those associated with

coordination councils, administrators to monitor contracts among programs, etc.—almost surely vary as well. The effects of local program structure on administrative costs are sometimes difficult to detect. For example, in Fresno, the SDA contracts with *service providers*, who in turn contract with *skill providers* who provide the actual training. Thus, there are three layers, each with its own administrative costs—suggesting (but hardly proving) that administrative costs are especially high. Separating administrative costs from operating costs is very difficult: The disaggregation would be especially problematic for JTPA, where administrative costs are often hidden in fixed-price contracts with service providers.

Even this brief discussion of indicators for judging the effectiveness of different local systems illustrates the many dimensions of the problem and how far we are from being able to make clear statements about system effectiveness. Unfortunately, current policy discussions about accountability tend to focus on only a few aspects of effectiveness. Florida's required placement rate of 70 percent, with its corollary effort to require that 20 percent of enrollees complete programs, is one example. In other states, discussions have focused on placement rates, earnings immediately after training, transfer rates from community colleges to four-year colleges, and exit examinations.

A danger is that efforts to impose quality standards and accountability measures in complex systems of work-related education and training programs influence not only the programs targeted in particular legislation, but also every other local program because of the interdependencies among them. For example, the cost-per-placement standard in JTPA has caused JTPA programs to shift away from longer, more expensive programs such as those offered in community colleges (unless their expense is offset by state revenues), and placement standards cause many SDAs to favor OJT over classroom training that would facilitate articulation with adult schools and community colleges. Similarly, a performance standard based on transfer rates would cause community colleges to shift their balance away from vocational programs, probably causing adult vocational programs to be taken over by AVTSs, with their shorter, noncredit offerings. A placement standard applied to certain institutions but not others may cause programs to be shifted into institutions that can avoid the standard. Any accountability measure, if unadjusted for differences in labor market conditions and the demographics of local populations, establishes incentives for creaming. Unevenly applied performance standards also create incentives for programs to send the least-prepared, least-experienced, or most difficult individuals to other programs in which standards are either relaxed or absent.

A related danger is that efforts to evaluate one program independently of others within a locality will fail to consider effects on individuals in

THE NEED FOR MULTIPLE INDICATORS OF EFFECTIVENESS

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other programs. The most obvious and troublesome example is that of short-term training programs, within JTPA or welfare-to-work, which may increase the employment of individuals in those programs, but at the expense of individuals enrolled in AVTSs or adult schools. Similarly, the expansion of community college certificate programs in response to employer demand may dry up positions that formerly went to JTPA and welfare clients. From a systems perspective, there would be no overall gain in employment, even though an evaluation of specific institutions would show positive effects.⁹ Under a performance-based policy, these institutions would be rewarded for their success, even though expanding them would not change the effectiveness of the overall system at all.

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Because funding mechanisms greatly influence the incentives for collaboration, performance-based funding would almost certainly change local systems by changing the incentives for institutions to cooperate. However, the nature of such changes would be difficult to predict, because the precise ways the funding would operate will depend on interactions with other aspects of funding mechanisms. In general, the powerful incentives to shift costs and risks to other local programs and the ability of most programs to select among potential enrollees (at least in the majority of communities where demand exceeds the supply of places) almost guarantee that performance measures in one program will affect other institutions in local systems.

When policymakers establish performance standards, they send a message to local program administrators about what they consider to be important. Administrators typically take those standards seriously and direct their energies to finding ways to meet them. In doing that, however, they may neglect other goals and activities. As one would expect, program administrators "play to the indicators." Consequently, it is very important for policymakers to emphasize a full range of effectiveness criteria and rely on multiple indicators.

The challenge is further complicated by interdependencies among work-related education and training programs. Policymakers need to be certain not only that they establish multiple performance indicators for individual programs and institutions, but that they also consider the system as a whole. Performance measures and debates about accountability must take into account potentially adverse effects not only on the individual programs they are intended to improve, but also on other education and training programs in local systems. Otherwise, improvement in one program may be matched by deterioration in another, and efficiency in one corner of the system may simply mask inefficiency in another.

⁹In economics terms, a general-equilibrium analysis needs to be substituted for a partial-equilibrium analysis.

It is clear from the eight communities in our sample that the pressures creating interdependencies among programs—particularly local initiatives stemming from a dislike of competition, state and federal policies to coordinate local efforts, and the emergence of brokering programs such as JTPA and welfare-to-work—are likely to continue. Indeed, in almost every community, local administrators report that coordination has improved over time and that intense competition among institutions was more typical in the 1970s and early 1980s than it has been recently. We doubt, therefore, that local systems will unravel: Once interdependencies are in place, a variety of institutional and policy pressures are likely to hold them together.

In addition, the experience of welfare-to-work programs—which almost always begin by convening every provider of job-related education and training and then work through existing institutions rather than devising new ones—suggests that the process of developing new education and training institutions has ended. In most areas, the institutions now in place—community colleges and technical institutes, AVTSs, adult schools, CBOs, and some proprietary schools—will continue in more or less the same forms they now take, even if specific institutions come and go, and even if “institutional inflation”—the tendency of educational institutions to progress from AVTSs to technical institutes to comprehensive community colleges—continues.

However, the proliferation of categorical funding for the education and training of specific groups is not likely to stop. New programs for welfare recipients were enacted in the Family Support Act of 1988, for displaced workers in the Educational Development and Workers Adjustment Act, and for illiterate employees in new workplace literacy initiatives, all adding to the complexity of funding sources. Congress persists in responding to newly discovered education and training needs with new categorical programs, placing the burden for rationalizing the resulting congeries of programs on state governments and local providers. As long as this pattern continues, the system of job-related education and training programs will continue to become more complex, with more funding sources and more responsibilities.

The continued proliferation of categorical funding while local institutions remain relatively stable implies that the interdependencies among institutions will become denser. With more funding sources, the possibilities for interactions among institutions will increase, as ways of allocating new responsibilities to existing programs and as ways of shifting some of the costs of these new responsibilities to other programs.

Because of the continuing tension between the relative stability of local institutions and the proliferation and growing complexity of policy initiatives, a systemwide perspective on work-related education and

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training is critical. Neither policymakers nor analysts can continue to consider individual institutions independent of the larger political and organizational context in which they operate. Although most policy will continue to be made on a program-by-program basis, and local institutions will continue to be distinguished by the different services they provide to different clients, the relationships among them will be an equally important determinant of how effectively the education and training needs of local communities are met. For this reason, we urge that future research on work-related education and training take a system perspective and that efforts to assess effectiveness use indicators that focus on the entire system as well as its individual components.

Appendix

OVERVIEW OF EDUCATION AND TRAINING PROVIDERS IN EIGHT LOCAL COMMUNITIES

Brief sketches of the education and training institutions in each of our eight sample communities are presented below, indicating the types of services provided and the numbers of individuals served. Also included is a brief description of the extent of interaction among institutions in each community and the mechanisms used for coordination among local providers.

This information is based on interviews with local respondents and record data provided by the education and training institutions. Because this study lacked the resources to generate new statistical data, we had to rely on information readily available from local institutions in whatever form they reported it. Although we have tried to make the overviews as comparable as possible, there are differences in time frames and in how categories of services and clients are reported.¹ However, we believe that, despite these gaps and inconsistencies, the sketches provide a valid basis for comparing communities and providers and that they augment the more qualitative analysis in the main text.

DES MOINES

The Providers

Secondary Schools

- The Des Moines public school district includes five high schools, but the majority of vocational programs are concentrated at the central campus, where vocational students from the entire district attend half-day sessions in one of about 20 programs—an arrangement similar to that in many AVTSs.
- About 1,200 (17 percent) of the district's 7,100 high school students are enrolled in vocational programs. Recent increases in graduation requirements have reduced vocational enrollments, as has the recent recession, and several programs have been eliminated because of low enrollments.
- The central campus is also used for adult education courses operated by the community college and by the New Horizons program (partly funded by JTPA), which serves about 1,500 potential high school dropouts and includes work experience and other vocationally oriented components.

¹Unless otherwise noted, all data are for the 1989-1990 fiscal or academic year.

Community College

- The Des Moines Area Community College (DMACC) offers about 70 certificate and Associate degree programs in vocational subjects at four campuses. Total enrollment is about 10,500, of which 40 percent (about 4,550 students) are in vocational programs. (Vocational enrollments recently declined about 25 percent because of a shift in state funding.)
- DMACC has about 260 JTPA clients and 320 dislocated workers enrolled in its vocational programs, with JTPA paying for tuition, books, and support services such as child care and transportation. The college also serves about 80 students through a JTPA 8-percent grant. The college has no other contracts with JTPA, and several prior contracts have been allowed to lapse.
- The college administers the New Jobs Training Program, which allows community colleges to generate revenues from training certificates (similar to revenue bonds) to support short-term and customized training. The Economic Development Group at DMACC, which is business-oriented and aggressive, provided training for about 15,000 individuals in short-term customized programs in 1989; it also encourages companies to use JTPA funds for OJT.

JTF.4

- About 80 percent of the SDA's 1,300 clients receive vocational training; most of the others participate in OJT.
- The SDA generally makes individual referrals, rather than contracting for large programs. About 60 percent of the referrals for classroom training (approximately 600 individuals) attend the community college. However, the SDA uses some CBOs and proprietary schools for less costly or open-entry programs.
- The SDA has established a ceiling of \$3,000 per client in training, although in practice, no one receives more than \$1,500 in subsidies. For those attending DMACC, the SDA tries to use Pell grants and student loans to keep its own costs down.

Promise/JOBS

- The SDA is responsible for local administration of Iowa's welfare-to-work program, Promise/JOBS. AFDC clients in Des Moines, unlike those in the rest of Iowa, are supported with Promise/JOBS funds, rather than being enrolled as JTPA clients using JTPA funds.
- At this stage, AFDC clients are allowed to choose their own programs; most receive classroom vocational training after participating in a job club. Those without a high school diploma or GED are referred to DMACC for remediation.

Coordination Among Institutions

- Although some course offerings are duplicated at the high school and community college levels, this was not reported to be a problem because of articulation agreements and oversubscribed programs at DMACC. DMACC has articulation agreements with the school district in business subjects; in other subject areas, such efforts are just beginning.
- A Regional Coordinating Council, established by state policy in 1985, provides a forum for individuals from government and business to coordinate economic development activities.
- The Des Moines Chamber of Commerce has convened a Labor Supply Task Force, and the Economic Development Group at DMACC also serves in a coordinating role, linking JTPA to businesses. These coordination activities are limited to short-term training focused on economic development.
- Although the welfare program convened various education and training institutions to plan Promise/JOBS, this group has not continued to meet.
- There appears to be some real competition between educational institutions and CBOs, particularly for JTPA funds.

General Observations

- Although relationships between the school district and the community college are good, both institutions cited difficulties in working with JTPA. Nonetheless, DMACC provides the majority of JTPA's classroom training, and the school district provides some youth programs for JTPA.
- Similarly, the early collaboration between JTPA and Promise/JOBS has been the subject of much complaint, although the welfare program continues to operate through JTPA.

FRESNO

The Providers

Secondary Schools

- Approximately 35 percent (4,200) of the 12,000 secondary students in the Fresno Unified School District (FUSD) are enrolled in vocational education programs (i.e., sequences of courses leading to a marketable skill).²

²The other large school district serving the Fresno metropolitan area is Clovis Unified. Twenty-seven percent of the 6,000 secondary students in Clovis are enrolled in vocational programs requiring a sequence of courses, and half of the district's high school students take some type of vocational course. Clovis is unique among school districts in that it has

- The primary occupational areas for which the FUSD provides training are agriculture, medical assistance (lab, office, nursing), graphics/printing, and a variety of traditional trades and industrial skills.
- The FUSD operates a vocational magnet school, designed to promote the district's voluntary desegregation plan. Duncan Polytechnic High School enrolls about 800 students in vocational education programs, 315 of whom come from other schools to participate in an ROP. There are also 215 adults enrolled in vocational education classes at this school.
- In addition, the FUSD operates an adult school that enrolled 32,448 students in FY 1989. Forty-eight percent of these students were enrolled in ESL and amnesty classes; 12 percent were in high school diploma and GED programs, and 7 percent were in elementary basic skills. Only 5 percent were enrolled in vocational courses. In FY 1990, the adult school expected to enroll approximately 6,000 new GAIN clients, half of whom were expected to take the elementary basic skills course.

ROC/P

- The ROC offers five different occupational programs; all but one, the nursing assistant program, are open-entry/exit. The ROP offers about 150 course sections across its entire service area.
- Between 4,000 and 4,500 students were enrolled at the ROC/P at any given time during the 1988-1989 academic year. This enrollment was evenly split between secondary and adult students.
- For state funding purposes, the ROC/P is capped at 1,386 ADA. However, it receives some excess-cost funding for the approximately 150 GAIN clients enrolled at the ROC and from rehabilitation and special education funds.
- The ROC/P has a \$700,000 ETP contract for retraining current employees and new hires in office automation and CAD systems.

Community College

- In the 1988-1989 academic year, Fresno City College (FCC) had a total enrollment of 15,728, 52 percent of whom (8,121) were enrolled in Associate degree and certificate-level vocational programs. The largest vocational programs are in business, accounting, child development, and criminal justice.

had several large ETP contracts over the past six years. With the ETP contracts, Clovis has trained students in computer-assisted drafting/design (CAD) and in statistical process control; the district has also administered an ETP contract for a large construction firm. Clovis has been able to meet ETP's performance standards and has purchased equipment with ETP funds that can also be used by the district's secondary vocational program.

- The college also operates the Vocational Training Center (VTC), which sponsors short-term (20 to 36 weeks), intensive (30 hours/week) open-entry/exit programs. The VTC program serves from 500 to 600 students at any time; about 40 percent of them are JTPA-funded (either directly or through CBOs), and 60 percent are GAIN clients. The VTC charges JTPA and GAIN only the excess costs associated with their clients (for special counseling, tracking, placement, and additional paperwork). However, because FCC is currently at its enrollment cap for state-funds reimbursement, the VTC cannot expand.
- FCC also runs a Training Institute to provide customized training for local firms and nonprofit institutions such as hospitals and city and county government. The institute receives no public funds, charges clients about \$100 per class hour, and in 1988-1989 had 35 contracts with employers.

Community-Based Organizations

- Approximately eight CBOs provide various types of job training services, primarily with JTPA and GAIN funds. Most of these organizations have their roots in the black, Hispanic, and Southeast Asian communities.
- Because JTPA uses a two-tiered strategy, issuing contracts to *service providers* who in turn subcontract with *skills providers*, some CBOs may provide only assessment and placement services and subcontract with public agencies such as the VTC at FCC for actual job training.
- SER, Jobs for Progress (an example of a CBO training provider)
 - provides JTPA services in the rural areas of Fresno to about 450 adults and 200 out-of-school youth. About 75 percent of SER's JTPA-funded clients are in OJT, and the rest are in vocational training. Some of the SER vocational training (e.g., account-clerk training) lasts up to 7 months. However, these programs are long for JTPA purposes, and SER is planning shorter programs, i.e., 10 to 16 weeks.³
 - has an ETP contract to retrain workers for office automation in small minority- and female-owned businesses.
 - does some initial assessment of GAIN clients.

Proprietary Schools

- There are approximately 40 proprietary schools in Fresno County, a few of which provide training to JTPA and GAIN clients.

³About 20 to 30 percent of SER's clients are non-English-speaking, but the organization does not provide ESL classes because they are not funded by JTPA. However, some firms are willing to hire non-English-speaking employees, and SER clients are placed for OJT in such firms.

JTPA

- The Fresno PIC/SDA served approximately 4,100 adults in FY 1988. The overwhelming majority of services to adults were provided through CBOs.
- Approximately 70 to 75 percent of JTPA funds are estimated to be used for OJT, and 25 to 30 percent are used for skills training.
- The PIC also manages all the employment and training services for the county's GAIN program.

GAIN

- As of May 1989, GAIN enrolled 9,400 clients, approximately 41 percent of the county's AFDC adult caseload. A total of 504 GAIN clients were enrolled at FCC during spring semester 1988; 433 (86 percent) finished the semester, 87 (17 percent) of them earning an Associate degree or certificate. About the same number of clients were enrolled in vocational training at the ROC/P and various CBOs. Approximately 3,300 clients were enrolled in basic skills and GED/high school diploma programs.
- For skills training, GAIN uses the VTC at FCC, the ROC/P, and some proprietary schools approved for JTPA training. The school district's adult education division provides the basic skills and ESL training. Assessment is done by nine different institutions in the county on a rotating basis: four CBOs (SER, Older Americans, Proteus, King of Kings), the ROC/P, California State University Fresno, FCC, Clovis Adult School, and the Fresno County Educational Opportunity Center.

Coordination Among Institutions

- There is extensive coordination among the public institutions providing education and training, but little interaction between these institutions and the CBOs.
- Among the public providers, long-time personal and professional relationships form the basis for ongoing coordination and gentlemen's agreements regarding divisions of labor. For example, adult education provides no occupational training longer than a year in duration, while FCC provides only ESL classes to students already enrolled in a vocational program there. Similarly, FCC has 35 articulation agreements with the ROC/P and local high schools.
- The CBOs have established spheres of activity that are defined largely by the nature of their constituencies (e.g., different ethnic groups, the aged) and by geographic areas of the city. Some of the CBOs have particularly strong ties to local politicians, so decisions about divisions of labor are made politically.

- The county GAIN program, one of the first in the state, has taken the position that it is a community program and all education and training providers should be included. As a result, approximately 25 groups and institutions provide some type of GAIN services and meet quarterly through the GAIN Community Advisory Committee.

General Observations

- Fresno has a coordinated education and training system, with little overlap in services among providers, all of whom also show a general desire to avoid conflict and competition. However, the coordination mechanisms for the public sector are very different from those for the private. The public sector is coordinated through long-time personal ties and a belief that cooperation expands the pie for all (e.g., through joint ETP contracts and by attracting more students with well-articulated programs). In contrast, the CBOs have used the political process to allocate funds and responsibilities, and their response to new entrants into the education and training field has typically been to divide the turf even further.
- The major impact of state policy on local service delivery stems from the enrollment cap imposed on the ROC/P and FCC as a result of California's Proposition 13. These limits on state reimbursement have decreased the numbers of GAIN and JTPA clients public institutions have been able to accept, and they have made the institutions more entrepreneurial in areas such as customized training.

JACKSONVILLE

The Providers

Secondary Schools

- The Duval County school district delivers secondary vocational education in 14 comprehensive high schools and three skills centers; the latter provide more intensive vocational programs, like those offered in AVTSs.
- About 22,000 (roughly half) of the district's high school students in grades 10 through 12 take some form of vocational education; most of the courses are in business, home economics, and trades and industry. About 6,400 students are enrolled in trades and industry programs in the skills centers. Enrollments have declined because of increases in academic course requirements; in addition, 12 programs were recently eliminated, partly because of the state's requirement that 70 percent of program completers must be placed in related jobs.
- The district jointly with JTPA funds a summer youth program serving 1,200 students—a program ranked first nationally among youth programs in 1988. The district also operates a special vocational school jointly with JTPA, with state and local

JTPA funds contributing 90 percent of total revenues. Another grant from Project Independence supports a teen parenting program. However, because the community college rather than the school district provides adult education in this region, adult JTPA and Project Independence clients are not served by the school district.

Community College

- The Florida Community College of Jacksonville (FCCJ) operates four campuses, a maritime training center, and an "open campus" whose students include individuals enrolled in customized training.
- The college enrolls 87,000 students, two-thirds of whom are adult noncredit students, since in this area the community college rather than the school district provides adult education. The remaining one-third are enrolled for college credit, in transfer-oriented Associate degree programs, and in vocational Associate degree and certificate programs. Of the 7,700 students enrolled in some form of vocational education, 2,800 are in certificate and Associate degree programs, and 4,900 are in noncredit courses. The college offers a full range of vocational programs, with occupational areas common to community colleges—computer and office systems, financial and business services, and health programs—having large enrollments.
- The college provides vocational training through contracts with JTPA for 120 adults and 50 dislocated workers, and it provides GED programs for 40 youth. Because of the SDA's stringent contracting mechanisms, the college cannot break even on these contracts. In addition, because of Florida's state aid formula, JTPA clients do not generate state FTE funds. However, the college calculates that money lost in one area can be recouped in another (e.g., customized training), that JTPA clients may come to the college later for further training, and that serving JTPA is part of its community function.
- At FCCJ, the Economic Development Center provides programs for upgrading the private sector work force, often customizing the regular vocational offerings to fit the needs of specific firms. Individuals enrolled in this training generate noncredit FTE funds from the state. Sunshine State Skills provides a small amount of funding, along with other state economic development programs. The center coordinates with the PIC and the local Job Service, so JTPA clients can enroll.

JTPA

- The SDA offers the usual array of JTPA services, with approximately 65 percent of recipients in OJT administered through CBOs and proprietary firms. The major provider of occupational and basic skills instruction for the remaining 35 percent is the community college, although there are a few CBOs and proprietaries.
- The SDA's contracting mechanism reimburses providers only when a client has been retained in training-related employment for 30 days. This system creates enormous

fiscal risk for providers, making CBOs reluctant to participate and allowing FCCJ to dominate classroom training.

- The SDA also receives referrals from Project Independence: After remedial education at FCCJ, clients are referred to the SDA; the majority receive OJT, and a smaller, though unknown, number receive occupational skills training at FCCJ. In this referral process, Project Independence clients receive support services through Project Independence funds, but OJT and occupational training are funded by JTPA.
- Jacksonville also has a Job Corps Center that enrolls 400 out-of-school youth each year in a two-year residential program of remedial education and vocational training. The Job Corps is administered by the regional office of the Department of Labor, which refers young people who may not be eligible for other JTPA programs; the Job Corps in turn refers some of its clients to FCCJ for vocational training, but the corps pays for tuition.

Project Independence

- The Jacksonville region was one of the first in the state to implement Project Independence and then JOBS. Five thousand adult AFDC recipients and 500 teenage mothers participating in a teen parent program are enrolled in Project Independence, although some may be deferred from active participation.
- Participants go through an orientation and assessment at FCCJ; then 90 percent are referred to FCCJ for ABE or GED programs, which are followed by a two-week job club. Those who do not find a job are referred to the SDA, primarily for OJT. A small proportion receive vocational education at FCCJ through individual referrals. However, because Project Independence does not provide its own resources for education and training, relatively few clients have been able to take this route.⁴

Coordination Among Institutions

- In addition to good working relationships among virtually all programs, a Regional Coordinating Council coordinates programs and approves new courses and programs; by all accounts, it works well.
- Linkages between FCCJ and the high schools are good: A dual enrollment policy allows high school students to enroll in FCCJ. There is a 2+2+2 program in engineering technologies, with others planned. In addition, the school district jointly administers with FCCJ several skills centers for high school students.

⁴The county administrator for Project Independence complained about the lack of training options for welfare recipients but claimed that a new state policy allowing welfare recipients to enroll in community colleges without paying tuition would probably improve options.

General Observations

- As in Miami, state policy has had a considerable effect in Jacksonville. In particular, the "leveling" process of determining which vocational offerings should be shorter, noncredit programs, and which should be longer, credit programs restructured much of vocational education. In addition, state placement standards have eliminated a number of programs.
- The most striking aspect of the education and training system in the Jacksonville area is the dominance of the community college, which provides—in addition to its own vocational programs—noncredit adult education, articulation with high school programs, a good deal of training for JTPA (despite its difficult contracting arrangements), basic education for JTPA and Project Independence, and a variety of economic development activities.

MIAMI

The Providers

Secondary Schools

- The Dade County public schools are responsible for both secondary and adult education in the region. Almost 23,000 of the approximately 76,000 high school students are enrolled in business education; 8,500 are in marketing and distribution; 8,400 are in industrial arts; relatively few are enrolled in other areas, such as health. High school students can also enroll in programs in the school district's adult centers; however, the state has been moving to deemphasize job-specific training in high schools, so these enrollments have been dwindling.
- The school district operates an extensive system of adult education, with 22 centers located throughout the area, including an aviation center near the airport and 5 technical or skills centers. The centers offer noncredit vocational education only, in individual courses and short-term certificate programs. About 160,000 individuals a year enroll in these programs, about half (82,000) in vocational subjects. The adult schools have done small amounts of training for JTPA, although this has been decreasing. The adult education system is the principal source of remedial education for Project Independence, the state's welfare-to-work program.
- The school district also has a Division of Business and Industry Services that provides training for companies recruited to the Miami area, as well as customized training for local firms. Both the school district and the community college claim good relationships in this area, with little duplication except in occupational areas where there is substantial demand (e.g., computer training).

Community College

- Miami-Dade Community College, often considered the country's most prominent community college, provides education for about 117,000 students per year at four campuses located throughout the Miami area.
- About 65 percent of these students are enrolled in academic courses, and the remaining 35 percent are in vocational courses. About 28 percent of incoming students intend to earn an Associate degree and transfer to a four-year college; about 10 percent declare an intention to earn a vocationally oriented Associate degree. Completion rates are low, however, despite one of the most sophisticated student tracking systems in the country: Roughly 4 percent of entering students and 10 percent of students declaring an intention to complete an Associate degree actually complete the requirements. The result is that while roughly 40,000 students are enrolled in vocational courses each year, only about 1,000 complete a vocational Associate degree. Most vocational students complete much less than a two-year program.
- There is some specialization by campus: The medical campus provides most health-related programs, while the downtown campus concentrates on business-oriented vocational programs. Otherwise, the college provides a full range of vocational offerings, including both Associate degree and certificate programs.
- Although Miami-Dade has had several contracts with JTPA, they have been relatively small—e.g., an accounting/clerk training program with initial enrollments of 45—and have generated conflicts over procedures, paperwork, and the college's difficulty in meeting performance standards. As a result, the college has virtually ended its contracts with JTPA. It will still serve as a subcontractor to CBOs to provide training, but it does not want to do outreach or placement. The college also has relatively few Project Independence recipients, since they are referred first to the school district's programs.
- Miami-Dade has a relatively active program providing customized training for private industries, through Centers for Business and Industry located on each campus. Most of the courses are based in part on those offered in standard vocational programs, with some customization. The program is supported partly by fees charged to firms and partly by state aid generated by individuals enrolled in customized courses; a small number of contracts with Sunshine State Skills Corporation provide additional resources.

JTPA

- The SDA subcontracts all its services, principally to CBOs. It funds about 3,600 individuals per year in programs ranging from 6 to 16 weeks; 80 percent of the SDA resources support OJT, and 20 percent support classroom vocational training.

- The SDA chooses providers on the basis of past performance, and neither the school district nor the community college has performed well in the past, partly because of weak placement efforts. However, the SDA does have a dropout prevention program with the school district which supports additional teachers and counselors during the school year for students who enroll in the Summer Youth Employment Program. Although the SDA currently has few contracts with either the school district or the community college, it is now trying to develop a model in which CBOs would do outreach and placement and educational institutions would provide remediation and classroom skills training.
- About 18 percent of SDA funds are earmarked for welfare clients; these resources tend to be used for classroom training through subcontracts with CBOs. The SDA also contracts with Project Independence to provide OJT to welfare recipients.

Project Independence

- Miami was the last region in the state to organize its welfare-to-work program, and many operational problems were encountered in the startup.
- Most clients are sent to job search after initial orientation and assessment; if they have less than a tenth-grade education, they are sent to the school district's centers for remedial education. Those with no work experience are sent to JTPA for training, and a few receive customized training through JTPA. A few individuals enroll in vocational education, in either the community college or proprietary schools, based on individual referrals.

Coordination Among Institutions

- Providers in the Miami area are quite knowledgeable about other providers and have established working relationships with most of them. In addition, a Regional Coordinating Council of varying effectiveness exists to coordinate the postsecondary vocational programs operated by the school district and the community college. A private economic development group, the Beacon Council, serves as a broker for short-term training related to economic development.
- The cooperation between the school district and the community college is good, except for some competition concerning short-term, noncredit offerings. Following state policy, the community college offers only credit vocational education; noncredit programs are offered exclusively by school district centers. A division of labor has developed, with the college offering longer-term Associate degree and certificate programs, while the centers offer short-term programs and individual courses, with articulation agreements between the two institutions. However, the college is trying to move into noncredit vocational education, particularly to give noncompleters some preparation for the labor market. Thus there is some competition between the college and the school district centers for those adult students who want short-term, nondegree programs.

- JTPA and the educational institutions do not work extensively together, partly because of the district's and the college's poor records on placement, and partly because the SDA has elected to emphasize OJT. The welfare-to-work program also provides little vocational training, although it does use the adult schools for remediation.

General Observations

- State policy in Florida significantly influences local education and training institutions. The state decision to move high school programs away from job-specific vocational education, the division of responsibility for adult education between the school district and the community college, and the requirement that vocational programs place at least 70 percent of their completers in related employment have powerful local effects.

PHILADELPHIA

The Providers

Secondary Schools and AVTSs

- Within the Philadelphia school system, 24 comprehensive high schools offer business, industrial arts, home economics, and some trades and industry courses; three full-time AVTSs offer an array of programs, as do two shared-time skills programs. One AVTS is focused solely on agriculture.
- Six academy programs within 13 high schools offer courses in business, applied electrical science, automotive, health, environmental technology, and horticulture.
- A total of 10,592 students (21 percent of the district's secondary students) are enrolled in vocational education programs in comprehensive high schools and skills centers; 5,119 (10 percent) are enrolled in AVTSs; and 1,600 (3 percent) participate in academy programs.
- Adult vocational programs enroll between 1,300 and 1,400 students and charge yearly tuition of between \$735 and \$5,600, depending on the occupational area.

Community College

- Recent emphasis at the Community College of Philadelphia (CCP) has been on transfer education, even in career education fields such as health. Most students enroll in general studies, and over half enter with the expectation of transferring to a four-year college. However, less than 10 percent earn an Associate degree and transfer. The largest vocational programs are economics and business administration; life sciences and allied health; mathematics, physical sciences, and engineering technologies; and social and behavioral sciences and human service careers. Programs are not offered in trades and industry areas such as automotive or air conditioning. The total 1988 enrollment at CCP was 37,000 (11,234 FTE).

- There are 1,650 students enrolled in Step Up (a demonstration welfare-to-work program at CCP), and an additional 600 AFDC recipients are enrolled at CCP.
- Some customized training is provided to firms (30 to 40 courses per semester). These courses tend to be in literacy skills and computers, and for specific departments of city government.

Community-Based Organizations

- The majority of JTPA providers are CBOs. Approximately 50 provide either referral or training services or both.
- Opportunities Industrialization Center (OIC) (an example of a CBO training provider)
 - was established 25 years ago by a coalition of 400 black churches and was one of the first CBOs to provide job training. It trains about 1,000 people a year in three training centers; it has an annual budget of about \$2 million, 14 percent of which comes from corporate contributions.
 - enrolled 785 JTPA clients in FY 1989, 100 of whom were in ABE and 270 in GED classes. Another 60 were in-school youth, and 58 received OJT. The remainder were enrolled in occupational training lasting 24 weeks, mainly in clerical skills. Another 24 welfare-to-work clients were trained for clerical occupations.

Proprietary Schools

- There are 55 proprietary schools in Philadelphia County. Approximately 9 proprietaries provided JTPA training in FY 1990; 11 of the 68 job training contracts let by the PIC in FY 1989 were with for-profit institutions.

JTPA

- The Philadelphia PIC is a nonprofit corporation that is also the SDA.
- In FY 1989, 13,800 adults were served. Of the 2,423 slots available in the first quarter of FY 1990, 43 percent were for classroom-based occupational skills training, 36 percent were for job readiness classes, 13 percent were for job search, 5 percent were for basic education/GED, and 3 percent were for OJT.
- The majority of training is delivered by CBOs, with limited use of the school district (99 slots, primarily in health occupations) and CCP; a few unions and proprietary schools are used.

Joint Jobs

- Joint Jobs currently enrolls 2,500 (out of 70,000 people in the mandatory job search category).
- The PIC has primary responsibility for managing Joint Jobs.
- Training runs from 9 to 18 months, but the PIC is considering longer-term training for those with serious skill deficits.
- Training is provided primarily by CBOs, Temple University, Lincoln College (a historically black college), and several proprietary schools.

Coordination Among Institutions

- The major education and training institutions are linked to the business community (through the Committee to Support Philadelphia Public Schools, the PIC board, etc.), but not to each other.
- Coordination between CCP and the four-year colleges and universities is fairly extensive.
- Some coordination occurs through the PIC on special projects such as the West Philadelphia Improvement Corporation (WEPIC), which links the schools, the universities, and the unions in a community school program, focusing instruction on neighborhood improvement activities (e.g., rehabilitating abandoned houses).
- There is no systematic coordination between the K-12 system and CCP or between those institutions and the CBOs or the proprietaries.

General Observations

- Although there is little coordination across institutions, there is little overlap in service provision.
- The fragmentation of vocational education within the secondary school system is likely to become more rationalized as significant school restructuring is implemented over the next several years.
- The orientations of several education and training institutions in Philadelphia are unique, but their philosophies may change with new leadership. For example, CCP is an inner-city community college strongly committed to academic-oriented transfer education; even the occupational programs are viewed as transfer programs. However, this perspective may change with a new CCP president. Similarly, the PIC,

with its bottom-line, business-oriented ethos, is like few others in the country. Yet, with a new president, it is expected to move toward a more social-service orientation.

SAN JOSE

The Providers

Secondary Schools

There are six high school and unified districts in the area served by the Central County ROC/P. Three districts serve the city of San Jose, two of which were examined as part of this study.

- **Eastside Union High School District**
 - Approximately 57 percent (12,000) of the high school students take at least one vocational education course, 9 percent are enrolled in vocational education programs within the district, and 4 percent attend the ROC/P; magnet programs are offered in vocational subjects and an academy program.
 - Child care is provided to GAIN clients as part of the district's training program in child development.
- **San Jose Unified School District**
 - Approximately one-half (4,234) of the students take at least one vocational education course; 35 percent of all vocational education coursetaking is in business, and 25 percent is in industrial arts. The remainder is in agriculture (9 percent), home economics (21 percent), and work experience (9 percent). Vocational education programs (i.e., sequences of courses) are offered by SJUSD in automobile brakes and retail sales.

ROC/P

- The ROC/P provides entry-level training in over 50 specialties in 12 occupational areas. Apprenticeship programs are offered for barbers, carpenters, auto body/repairmen, painters, dry wall installers, and electricians.
- The program enrolls 17,523 students (3,350 FTE), over half of whom (53.2 percent) are adults. The ROC/P has 50 additional GAIN ADA (80 students).

Adult Schools

- A centralized unit provides adult education to San Jose and the neighboring suburb of Campbell. The unit enrolls 35,000 students, 250 of whom are GAIN clients.
- Programs are offered in parent education, ESL, high school diploma, citizenship, adult handicapped, and older adults. Limited occupational training is offered in subjects that can be delivered in classrooms—mathematics for trades, accounting, and typing. Over half of the program consists of ESL instruction.

Community Colleges

- Two community colleges serve the city of San Jose; seven serve GAIN clients in Santa Clara county.
- As of October 31, 1989, half (479) of the GAIN clients enrolled in occupational training were attending community colleges. In 1989, 1,200 GAIN clients were served by the community college consortium in basic education, ESL, and occupational training.
- San Jose City College (SJCC)
 - has a total enrollment of 9,835; enrollment has been falling for several years (14 percent since 1987). About 35 to 40 percent of the SJCC students are in occupational education. The largest occupational majors are electronic technology, business accounting, auto technology, and air conditioning.
 - enrolls more students in ESL (500 ADA) than in any of its other 51 programs.
 - has a \$1.25 million contract with IBM for a 24-hour lab providing on-site, job-specific, computerized training. Associate degree instruction is offered at a Pacific Telesis worksite.

Community-Based Organizations

- CBOs do most of the JTPA training; they also do some GAIN ESL and occupational training.
- Center for Employment Training (an example of a CBO training provider)
 - enrolls approximately 2,000 trainees in San Jose.
 - has a \$20 million budget, about 38 percent of which comes from JTPA and about 2 percent from GAIN. The remainder comes from an ETP contract, Pell revenues, rehabilitation contracts, and ESL funding sources such as the IRCA amnesty program.
 - provides ESL and occupational training in 20 areas (e.g., word processing, manufacturing, sheet metal).

Proprietary Schools

- Approximately 30 proprietary schools are located within the city of San Jose.
- 259 GAIN clients attend proprietary schools.

JTPA

- The SDA is a county agency.
- There is almost total reliance on CBOs for providing services, and there is greater emphasis on classroom training than on OJT.

GAIN

- As of October 31, 1989, there were 8,631 clients: 2,096 (24 percent) were in preorientation; 2,276 (26 percent) were in orientation/appraisal; 404 (5 percent) were in post-assessment; 1,884 (22 percent) were in basic education: 962 in ESL, 370 in GED, and 552 in ABE; and 949 (11 percent) were in vocational training.
- Eight CBOs provide ESL training; other ESL and basic education classes are provided at 40 adult education sites and 7 community colleges.
- Of the 949 clients enrolled in vocational education, 479 (50 percent) are attending community colleges, 259 (27 percent) are in proprietary schools using Pell grants, 131 (14 percent) are being trained by CBOs, and 80 (8 percent) are enrolled at the ROC/P.

Coordination Among Institutions

- Coordination among public institutions includes:
 - links between the ROC/P and the secondary schools.
 - articulation agreements between the ROC/P and SJCC in eight occupational areas.
 - interlocking board memberships.
 - a consortium of all the community colleges providing services to GAIN clients.
 - JTPA and GAIN under the same department, sharing facilities, and administratively coordinated.
- There is no coordination or interaction between the public institutions and the CBOs.

General Observations

- Overlap in service provision among institutions is limited largely to ESL and basic education, where the demand is high.
- Several state policies have exerted a significant impact on education and training institutions in San Jose. Academic course requirements for high school graduation

have been increased, with the result that students have less time to enroll in vocational programs that require 2- or 3-hour sequences. Eastside reported a 14 percent drop in vocational enrollments in just one year, and San Jose Unified experienced a five-year decrease of 30 percent at a time when overall district enrollment dropped only 17 percent.

The enrollment cap imposed on community colleges and regional vocational centers after Proposition 13 has also affected local operations. Administrators reported having little incentive to start new programs that need to be supported with state funding. Finally, the state requirement that GAIN clients receive services in a particular order has meant that those in basic education become discouraged because they must wait for the vocational training that, in their eyes, has the most immediate pay-off. However, the state is now allowing the county to experiment with "concurrency," which will permit clients to receive basic education and job training simultaneously.

SCRANTON

The Providers

Secondary Schools

- The Scranton school district enrolls 4,100 secondary students, of whom 750 (18 percent) take at least one vocational course, 60 (1.5 percent) are enrolled in a vocational program at one of the comprehensive high schools, primarily in business education, and 170 (4 percent) attend the AVTS.

Area Vocational Technical School

- The AVTS offers half-day programs at two facilities in about 20 different occupations; most of the enrollments are in the trades and industry area and in cosmetology.
- The AVTS enrolls 600 secondary students from 9 local school districts; 500 to 600 adults attend night classes; 20 to 25 are integrated into the secondary classes; and 80 to 90 are enrolled in a licensed practical nurse (LPN) program. JTPA funds 20 slots in the LPN program and several in the shop programs.
- AVTS secondary enrollments have declined about 15 percent per year, while the area's secondary enrollment has decreased about 7 percent per year. The state-mandated increase in academic course requirements for high school graduation, coupled with a state law that requires vocational programs to run for 3 hours a day, exacerbated the drop in overall secondary enrollment. The feeder school districts forced the AVTS to move from a 3- to a 2-year program in 1986, but the 3-year program has been restored this year with the expectation that enrollments will begin to rise again. Nevertheless, the decline over the past decade has been so great that the AVTS' second facility was closed this year.

Community College

- There is no public community college in Scranton. The closest one is Luzerne Community College, about 20 miles to the southwest. Through its Institute for Developmental Educational Activities (IDEA), Luzerne has an extensive customized training program. Currently, it administers three contracts in the Scranton area, funded by the state's Customized Job Training program, in which about 131 people are trained in firm-specific skills.
- The Johnson Technical Institute, a private, nonprofit institute that receives some state general aid funding, is located in Scranton. Johnson enrolls about 500 students in Associate degree programs in specialized technology and trades areas; 35 percent are in construction, 20 percent are in health services, and the remainder are in manufacturing.

Proprietary Schools

- There are two private junior colleges in the area that offer certificate and Associate degree programs in business, health, general engineering, applied science, and computer occupations. One of the junior colleges provides clerical and literacy training to JTPA clients.
- There are five proprietary schools in Scranton. One provides JTPA training in clerical and data-entry skills and some literacy training. Another trains about 30 tractor-trailer drivers a year under a JTPA contract, and a third trains medical assistants with JTPA funds.

JTPA

- JTPA enrolls about 600 to 700 adult clients a year. Of the 175 enrolled in the last quarter of 1989, 14 percent (25) were in GED/literacy classes, 29 percent (40) were in OJT, 14 percent (25) were in work experience, and the remaining 49 percent (90) were in classroom vocational training.
- The SDA uses most of the education and training providers in the area, including the AVTS, a private four-year college, the school district, Goodwill Industries for the handicapped, private postsecondary institutions, and the several proprietary schools. Literacy training is on an informal rotation schedule between the private junior college and the four-year college.

Joint Jobs

- Scranton's participation in Joint Jobs was not due to be implemented for several months at the time of this study. However, the plan was to have the SDA take re-

sponsibility for intensive case management of Joint Jobs clients (about 68 clients were expected, approximately 8 percent of the county's mandatory welfare-to-work caseload). The major education and training providers were to be the same as those for JTPA, with a few additions, including the Women's Employment Program, a CBO, which would provide a two-week workshop on survival skills and then occupational training. The 10 to 15 Joint Jobs clients who are pregnant and parenting teens will have their own case manager.

Coordination Among Institutions

- The Scranton Chamber of Commerce recently initiated a coordinating effort, Skills in Scranton, to identify the workplace skills needed in the area, to communicate them to educational institutions, and to spearhead joint ventures between the educational and business communities. The education and training institutions in the community see the chamber as the source of coordination because of its clout as the economic development arm directly responsible for attracting most of the new business that has come into the area over the past decade.
- As part of a state-level initiative to encourage "one-stop shopping," the Job Center in Scranton now has staff from other agencies such as JTPA, the welfare department, vocational rehabilitation, and the Educational Opportunity Center on the premises several days a week. The concept of a multiservice center had been used previously in the city about 20 years ago after a major flood.
- The AVTS has articulation agreements with Luzerne Community College in three occupational areas, and with a state technical institute (Williamsport) in one area.

General Observations

- Because Scranton is a relatively small, homogeneous community, the major education and training institutions have complete information about each other, and JTPA and Joint Jobs can easily include most institutions among their providers. The successful track record of the Scranton Chamber of Commerce as an economic development broker provides a strong incentive for the educational institutions to cooperate with it.
- However, there is still marked competition among different segments of the education and training community. For example, because secondary enrollments are falling and local districts lose ADA support if their students attend the AVTS, the districts do not actively encourage students to enroll in other institutions. In fact, some high schools forbid their students to attend the AVTS; students who want to enroll in the AVTS must transfer to a different school. Similarly, the private postsecondary institutions compete for students in certain occupational areas (e.g., business), and local institutions worry that Luzerne Community College may expand its activities in Scranton as it searches for new opportunities to provide customized training.

SIOUX CITY

The Providers

Secondary Schools

- In the Sioux City Community School District, vocational education is provided in three high schools and an alternative school, although a central campus located within the alternative school offers the most programs. The alternative high school is a joint venture with the community college; about three-quarters of its funding comes from the school district, and the remainder comes from the college. A career component administered by JTPA also provides resources for job-seeking skills, career exploration, and work experience.
- About 36 percent of the 3,700 high school students in the district take some form of vocational education; 20 percent are in industrial areas, a figure that declined by about 5 percentage points during the 1980s as academic requirements increased.

Community College

- Western Iowa Technical Community College (WITCC), originally a technical institute but now a comprehensive community college, enrolls about 1,500 students each semester, 80 percent of them in vocational programs. The college has five satellite centers throughout the area, in addition to the main campus. The college offers quite a variety of vocational offerings because it is located in a declining agricultural region, and many students will have to go to other areas to find employment. Programs range from two to eight terms in length, with a few shorter ones also available. Expansion into new areas (such as health) is difficult because of funding restrictions. The college jointly administers several programs with the school district, and the district also contracts with the college to provide certain vocational classes.
- The college provides the majority of classroom vocational training for JTPA, and—because the welfare-to-work program (Promise/JOBS) is administered by JTPA—it also provides occupational training to welfare recipients. The community college has responsibility for ABE in the region and provides remediation for JTPA clients. In addition, a Welfare Reform Coordinating Committee refers welfare recipients without high school diplomas to GED programs at the college. The inclusion of JTPA and welfare clients in vocational programs at the college is facilitated by the Special Needs Division of WITCC, which includes the Career Planning Service and the Career Learning Center; these services provide assessment, remediation, and tutoring to all students enrolled in the college.
- The Economic Development Group within WITCC administers training certificates which support customized training, serving about 300 individuals a year in roughly 35 firms. In addition, the college operates a Small Business Development Center, providing technical assistance and training to about 300 small businesses a year. WITCC is also the regional center for the Iowa Economic Development Network,

which helps Iowa businesses market their products. The college works closely with the Sioux City Chamber of Commerce, the city's office of economic development, and the Sioux Land Economic Development Corporation.

JTPA

- WITCC is the administrative entity for JTPA in the region. The SDA serves about 700 clients a year. Those in need of remediation generally use the Career Learning Center at the college, though some receive ESL and ABE programs through adult education offered by the school district. About 20 percent of the clients receive classroom skills instruction, most of them at the community college (using Pell grants where possible); another 20 percent receive OJT. The remainder receive job search assistance through a preemployment training program and the college's placement office.
- The SDA also provides basic education and occupational training for about 160 Promise/JOBS clients. Most of these individuals are enrolled in programs at the college, although a few are in OJT. The SDA uses 8-percent funds to support an Individualized Learning Center for high school dropouts; the center is operated jointly by the school district and the college. The SDA also contracts with the school district for work experience programs.

Promise/JOBS

- Promise/JOBS follows a statewide model and sequence of services. Resources for AFDC clients flow directly to institutions that serve them or to the clients themselves, so the local welfare office has relatively little power and is limited largely to referring clients to appropriate agencies.
- After an initial assessment, clients without a high school diploma are first sent to the JTPA agency (located at WITCC) to be placed in GED classes, either at the Individualized Learning Center or the remedial programs operated by JTPA at WITCC; they then continue in JTPA-sponsored programs at the community college or enter postsecondary education. Clients who have a high school diploma go first through job search; those who fail to find employment then enroll in classroom occupational training provided through WITCC (with AFDC paying tuition, books, and support services).
- About 20 percent of the program participants have been in Job Club, 11 percent in remedial education, and almost 20 percent in postsecondary education and training—about 2,000 individuals at one time.

Coordination Among Institutions

- Relationships among major education and training programs seem well-defined. There appears to be a smooth flow of individuals among JTPA, Promise/JOBS, the community college, and the school district—a flow facilitated by the fact that the col-

lege administers JTPA and has good working relations with the school district (including several jointly administered programs).

- Most JTPA and welfare clients are enrolled in WITCC programs; the SDA administration is obviously familiar with the college programs, there are relatively few CBOs in the area, and proprietary schools are expensive and reported to be unreliable.

General Observations

- Sioux City is a clear example of a community in which the community college is dominant. The college administers several programs with the school district. It manages JTPA and provides most of the classroom training for JTPA clients. Because the welfare-to-work program operates through the SDA, the college also provides most of the basic and occupational education for welfare clients. WITCC is central to all economic development efforts in the region.

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